

ARIZONA ACADEMIC STANDARDS
HIGH SCHOOL

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The Arts Standards Rationale

Dance, music, theatre and visual arts are everywhere in our lives, adding depth and dimension to the environment we live in and shaping our experiences, often so deeply or subtly that we are unaware of their presence. In any civilization, the arts are inseparable from the very meaning of the term “education.” To be truly educated, one must have knowledge and skills in **Creating Art, Art in Context** and **Art As Inquiry**. In addition to specialized instruction in the arts, the knowledge and skills will be further enhanced by integration of the arts across the other curricular areas. Building mastery at each of the readiness, foundations, essentials, proficiency and distinction levels is the overriding principal of a rigorous arts education. As students continue to use a wide range of subject matter, symbols, images and expressions, they grow more sophisticated in their knowledge and use of the arts to investigate, communicate, reason and evaluate the merits of their work. As a result of developing these capabilities, students can arrive at their own knowledge, beliefs and values for making personal and artistic decisions and be better prepared to live and work in a constantly changing, expanding society.

All students will achieve the essentials level (see standards section of this document) in the four arts disciplines (music, visual arts, theatre and dance) and attain the proficiency level in at least one art form on or before graduation. All levels are built upon previous levels. Since students will achieve the proficiency level at different ages or rates, schools will provide curriculum to allow students who go beyond proficiency to study at the distinction level.

Education in the arts benefits students by:

- cultivating the whole child by building multiple literacies (e.g., developing intuition, reasoning, imagination and dexterity) into unique forms of expression and communication
- initiating them into a variety of ways of perceiving and thinking that will help them see and grasp life in new ways
- teaching the analyzation of nonverbal communication and the making of informed judgments
- enhancing understanding of themselves and others
- acquiring the tools and knowledge to take charge of their own learning—assessing where they have been, where they are and where they want to go
- promoting the processes of thinking, creating and evaluating
- developing attributes of self-discipline and personal responsibility, reinforcing the joy of learning and self-esteem, and fostering the thinking skills and creativity valued in the workplace
- demonstrating the direct connection between study, hard work and high levels of achievement
- giving them knowledge of potential career pathways or involvement in the arts
- encouraging experimentation with and utilization of current technology
- fostering a lifelong appreciation for and support of the arts

An education in the arts also benefits society and the workplace because students gain powerful skills for:

- understanding human experiences, both past and present
- learning to adapt to and respect others' ways of thinking, working and expressing themselves
- learning artistic modes of analyzing different situations, which brings an array of expressive, analytical and developmental tools to everyday experiences
- encouraging experimentation with, and utilization of, new electronic media and global networks to give them marketable workplace skills
- understanding the influences of the arts to create and reflect cultures
- understanding the impact of design on virtually all we use in daily life, and in the interdependence of work in the arts with the broader worlds of ideas and action
- learning adaptability and flexibility to meet the needs of a complex and competitive society
- learning the importance of teamwork and cooperation
- making decisions in situations where there are no standard answers
- bringing their own contributions to the nation's storehouse of culture
- communicating their thoughts and feelings in a variety of modes, giving them a vastly more powerful repertoire of self-expression
- carrying our individual and collective images and ideas from one generation to another
- recognizing the essential role the arts have in sustaining the viability of cultures

Whenever possible and within the limits and needs of individual districts, students need direct contact with objects, professional artists and performers through partnerships with state and local resources (e.g., museums, symphonies, artists in residence, traveling exhibits, theatre companies, art centers, dance companies).

Inservice and support to teachers, parents and students will be an ongoing process as innovative and integrated approaches for learning are developed within the four arts disciplines and across the other subject areas.

Success will be realized when all students have equal access to all the arts.

Research Supporting the Value of the Arts as Core Subjects

- The arts have far-reaching potential to help students achieve education goals. Students of the arts continue to outperform their non-arts peers on the Scholastic Assessment Test, according to the College Entrance Examination Board. In 1995, SAT scores for students who had studied the arts more than four years were fifty-nine points higher on the verbal and forty-four points higher on the mathematics portion than students with no course work or experience in the arts.

The College Board, Profile of SAT and Achievement Test Takers, 1995

- The percentage of students at or above grade level in second grade mathematics was highest in those with two years of test arts, less in those with only one year and lowest in those with no test arts.

Learning Improved by Arts Training, Nature: International Weekly Journal of Science, by Alan Fox, Donna Jeffrey and Faith Knowles, May 1996

- Researchers at the University of California, Irvine, studied the power of music by observing two groups of preschoolers. One group took piano lessons and sang daily in chorus. The other did not. After eight months the musical three year olds were expert puzzlemasters, scoring 80 percent higher than their playmates did in spatial intelligence--the ability to visualize the world accurately. This skill later translates into complex mathematics and engineering skills. "Early music training can enhance a child's ability to reason," says Irvine physicist Gordon Shaw.

Scientists argue that children are capable of far more at younger ages than schools generally realize...the optimum "window of opportunity for learning" lasts until about the age of ten or twelve, says Harry Chugani of Wayne State University's Children's Hospital of Michigan.

Why Do Schools Flunk Biology?, Newsweek, by LynNell Hancock, February 1996

- Classes were more interactive, there were more student-initiated topics and discussions, and more time was devoted to literacy activities and problem solving activities in schools using the arts-based "Different Ways of Knowing" program. The program also produced significant positive effects on student achievement, motivation and engagement in learning.

Different Ways of Knowing: 1991-94 National Longitudinal Study Final Report, by J.S. Catterall, 1995

- Self-concept is positively enhanced through the arts, according to a review of fifty-seven studies, as are language acquisition, cognitive development, critical thinking ability and social skills. The authors examined studies of measurable results in the emotional and social development of children. The relationship between music participation and self-concept was strongly in evidence.

The Effects of Arts and Music Education on Student's Self-Concept, by J. Trusty and G. M. Oliva, 1994

- As critics, the children learned to emphasize the value of rules, resources and bases for common knowledge in dramatic interpretation. As characters, they shifted perspective from self to other through voice, physical action, and connection to other characters.

Learning to Act/Acting to Learn: Children as Actors, Critics, and Characters in Classroom Theatre, by Shelby Wolf, 1994

- Research at New York University revealed that critical thinking skills in the arts are transferred to other subjects,¹ which is something Ann Alejandro, a teacher in the Rio Grande Valley in South Texas, observes in

¹

her classroom everyday: "I am convinced of the parallels between teaching children how to draw and teaching them how to read and write. In all cases, students need to learn how to see, to interpret data from the word, the canvas, and the page."²

- The writing quality of elementary students was consistently and significantly improved by using drawing and drama techniques, compared to the control group, which used only the discussion approach. Drama and drawing techniques allowed the students to experiment, evaluate, revise and integrate ideas before writing began, thus significantly improving results.

Drama and Drawing for Narrative Writing in Primary Grades, by B.H. Moore and H. Caldwell, 1993

- Students improved an average of one to two months in reading for each month they participated in the "Learning to Read Through the Arts" program in New York City. Students' writing also improved, the study revealed. "Learning to Read Through the Arts," an intensive, integrated arts curriculum, has been designated a model program by the National Diffusion Network and has been adopted by numerous schools and districts across the country.

Chapter 1 Developer/Demonstration Program: Learning to Read Through the Arts, 1992-93; Office of Educational Research, New York City Board of Education, 1993, 1981, 1978

- Originality and imagination scores were significantly higher for preschool children with disabilities after participation in a dance program than for those participating in the adopted physical education program.

Effect of a Dance Program on the Creativity of Preschool Handicapped Children, by D. Jay, 1991

- "Humanitas Program" students in Los Angeles high schools wrote higher quality essays, showed more conceptual understanding of history, and made more interdisciplinary references than non-Humanitas students. Low-achieving students made gains equivalent to those made by high-achieving students. The Humanitas Program incorporates the arts into a broad humanities curriculum, drawing upon the relationship between literature, social studies and the arts. The program has reached 3,500 students in twenty high schools.

The Humanitas Program Evaluation Project 1990-91, by P. Aschbacher and J. Herman, 1991

- High-risk elementary students with one year in the "Different Ways of Knowing" program gained eight percentile points on standardized language arts tests; students with two years in the program gained sixteen percentile points. Non-program students showed no percentile gain in language arts. Students with three years in the program outscored non-program students with significantly higher report card grades in the core subject areas of language arts, mathematics, reading and social studies. Participants showed significantly higher levels of engagement and increased beliefs that there is value in personal effort for achievement. In total, 920 elementary students in fifty-two classrooms were studied in this national longitudinal study in Los Angeles, south Boston, and Cambridge, Massachusetts.

Different Ways of Knowing: 1991-94 National Longitudinal Study Final Report, by J.S. Catterall, 1995

¹National Arts Education Research Center Principal Research Findings, 1987-1991, by Jerrold Ross and Ellyn Berk, 1992

²Like Happy Dreams-Integrating Visual Arts, Writing and Reading, by Ann Alejandro, 1994

Table 1. The Arts Standards

MUSIC

STANDARD 1: Creating Art

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

STANDARD 2: Art in Context

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

STANDARD 3: Art As Inquiry

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

VISUAL ARTS

STANDARD 1: Creating Art

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

STANDARD 2: Art in Context

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

STANDARD 3: Art As Inquiry

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

THEATRE

STANDARD 1: Creating Art

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

STANDARD 2: Art in Context

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

STANDARD 3: Art As Inquiry

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

DANCE

STANDARD 1: Creating Art

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

STANDARD 2: Art in Context

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

STANDARD 3: Art As Inquiry

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

The Arts Standards Integration Statement

Because the Arizona Department of Education has an expectation that the content areas will be integrated across the curriculum, this document provides suggested integration links for each discipline and its related standard. Arizona's Arts Standards address competence in the arts disciplines first of all. That competence provides a firm foundation for connecting arts-related concepts and facts across the art forms, and from them to the sciences and humanities. A key factor in this approach to learning is the need for students to acquire enough prior knowledge and experience in one discipline to make applications in another.

Integration means identifying concepts shared among two or more content areas and including performance objectives for each discipline in the instructional model. All subject matter disciplines are comprised of concepts. A concept is an idea which applies to multiple content areas but which may represent the idea in different ways when used within each individual content area. Concepts can be very concrete or they can be representative of abstract ideas.

Learning is an integrative process. In a balanced curriculum, opportunities for students to use what is learned in one discipline to clarify or enhance an idea, concept, or skill in another occur almost daily. As learners work across the disciplines, there are many opportunities to discover relationships that lead to the process of forming ideas and concepts. This way of learning provides an intellectual stimulation involving thinking, feeling, and doing behaviors that enable students to be more flexible and inventive in their approaches to problem solving processes. All teachers, regardless of discipline, are encouraged to find links between their subjects and the area of the arts.

Integration links which appear in Arizona's Arts Standards follow the performance objectives (POs) within the standards. The links identify other disciplines and the concepts they share with the arts. These references suggest a few examples of the many ways creative teachers will make connections between content areas.

Credits: Visual and Performing Arts Framework for California Public Schools (1983)
National Standards for arts Education (1994)

THE ARTS STANDARDS
BY LEVEL: PROFICIENCY (Grades 9-12) and DISTINCTION (Honors)

MUSIC

STANDARD 1: CREATING ART (Music)

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

(Proficiency Grades 9-12)

- **1AM-P1. Sing/perform with expression and technical accuracy a large and varied solo and ensemble repertoire with level of difficulty 4 on a scale of 1-6, including some songs performed from memory and without accompaniment**

PO 1. Perform pieces of various styles for an audience with improved expression (e.g., dynamics, phrasing) and technical accuracy (e.g., breath support, pitch, diction)

PO 2. Sing/play numerous pieces of music in various styles (e.g., spirituals, folk songs, madrigals, jazz, baroque, contemporary)

*Possible links to: Foreign Language - communication, culture, communities;
Social Studies - culture, region, socialization, history*

- **1AM-P2. Recognize (by sight/ear) chord structures and the chords in standard harmonic progressions**

PO 1. Identify chord qualities (e.g., major/minor, augmented/diminished)

PO 2. Identify chord progressions and/or modulations taken from selected musical passages

Possible links to: Art – harmony; Science - energy, physics of sound

- **1AM-P3. Demonstrate the ability to read a score of up to four staves, in two or more clefs**

PO 1. Identify various musical notation symbols (i.e., note names, phrasing, articulation) used in a score

PO 2. Identify chord structure (i.e., harmony) from a four-part score

Possible links to: Art - form, texture, rhythm, harmony; Math - count, divide, integers, place value; Science - motion, sound

- **1AM-P4. Sight-read music accurately and expressively with level of difficulty 3 on a scale of 1-6**
- **1AM-P5. Improvise stylistically appropriate harmonizing parts, rhythmic and melodic variations on given pentatonic melodies and melodies in major and minor keys, and original melodies over given chord progressions, each in a consistent style, meter and tonality**

PO 1. Identify the elements that define a style

PO 2. Improvise using elements from a given style

- **1AM-P6. Compose music in several distinct styles, demonstrating creativity in using elements of music for expressive effect**

Possible links to: Foreign Language - culture, connections; Science - cause/effect; Social Studies - culture, race, region, location, conflict

- **1AM-P7. Compose and arrange pieces for voices or instruments other than those for which the pieces were written, in ways that preserve or enhance the expressive effect of the music**

PO 1. Notate arrangements using either traditional or non-traditional notation

PO 2. Explain technical and artistic considerations used in the score (e.g., bowing, breath marks, ranges)

- **1AM-P8. Understand the basic concepts of music theory**

PO 1. Read music using standard notation

PO 2. Write music using standard notation

PO 3. Analyze selected musical excerpts

PO 4. Identify form in music (e.g., rondo, theme and variation, binary)

Possible links to: Art - form, balance, texture, symbolism; Dance - form, energy, motion, movement; Math - linear measurement, symmetry/asymmetry

- **1AM-P9. Understand and demonstrate the range and playing system of at least one instrument or demonstrate the range and expressive possibilities of the voice (e.g., soprano, alto, tenor or bass)**

Possible links to: Science - sound, equilibrium of force, structure, matter

- **1AM-P10. Develop and sustain a portfolio of created work demonstrating the progression of knowledge and skills**
- PO 1. Produce evidence of continued musical growth (e.g., concert program, audio/video recordings, compositions, analysis)
- PO 2. Identify personal future goals through a letter or essay

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **1AM-D1. Sing/perform a large and varied repertoire of solo and ensemble literature with level of difficulty 5 on a scale of 1-6, with expression and technical accuracy**

*Possible links to: Foreign Language – culture, communication, communities;
Social Studies – culture, region, socialization*

- **1AM-D2. Sing music written in more than four parts**

Possible links to: Art – harmony; Science – energy, physics of sound

- **1AM-D3. Sight-read music accurately and expressively with level of difficulty 4 on a scale of 1-6**
- **1AM-D4. Demonstrate the ability to read a full instrumental or vocal score**
- **1AM-D5. Describe how the elements of music, transpositions, and clefs are used in a full score**
- **1AM-D6. Improvise stylistically appropriate harmonizing parts in a variety of styles**
- **1AM-D7. Improvise original melodies and harmonizing parts in a variety of styles, over given chord progressions, each in a consistent style, meter and tonality**
- **1AM-D8. Compose/arrange music, demonstrating imagination and technical skill in applying the principles of composition and orchestration**
- **1AM-D9. Conduct and rehearse a peer group, demonstrating knowledge and understanding of the score**

STANDARD 2: ART IN CONTEXT (Music)

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

(Proficiency Grades 9-12)

- **2AM-P1. Classify by genre or style and by historical period or culture unfamiliar but representative aural examples of music; explain reasoning behind their classifications**

*Possible links to: Foreign Language - culture, communication, communities;
Social Studies - culture, race, region, location, history*

- **2AM-P2. Identify sources of American music genres (e.g., blues, Broadway musical, swing, gospel), trace the evolution of those genres, and cite well-known musicians in each**

Possible links to: Science - cycle, change, metamorphosis, cause/effect, evolution/adaptation, cycles/succession; Social Studies - culture, race, region, location, history

- **2AM-P3. Analyze and interpret how technological and scientific advances in music and other disciplines (e.g., history of the printing press on music publishing, instrument manufacturing, computer-assisted composition and arranging, advances in studio recording techniques) influence the creation of work**
- **2AM-P4. Compare and describe the influence on music of economic, political, social and literacy aspects of at least two time periods or cultures**
- **2AM-P5. Identify various roles (e.g., teacher, transmitter of cultural traditions, entertainer) that musicians perform, cite representative individuals who have functioned in each role, and describe their activities and achievements**

PO 1. List job qualifications and educational requirements of various roles

PO 2. Identify persons in various musical fields who meet above stated qualifications

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **2AM-D1. Interpret non-standard notation and symbols used by some twentieth century composers (e.g., John Cage, Varese)**

- **2AM-D2. Identify and describe music genres or styles that show the influence of cultural traditions, identify the cultural source of each influence, and trace the historical conditions that produced the synthesis of influences**

STANDARD 3: ART AS INQUIRY (Music)

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

(Proficiency Grades 9-12)

- **3AM-P1. Demonstrate extensive knowledge of musical terminology by comparing those terms with terms and usage in literature, history and the other arts**

Possible links to: Art - color, line, form, space, texture, balance, rhythm, harmony, emotional, meaning; Comprehensive Health/Dance - time, force, energy, rhythm, motion, movement, kinesiology; Foreign Language - culture, communication, communities; Mathematics - numbers, count, add, divide, measurement, time, geometry, line; Science - equilibrium of force and structure, sound, cycle, chance, cause/effect, energy, balance, theory; Social Studies - culture, race, region, location, history

- **3AM-P2. Identify and explain compositional devices and techniques (e.g., unity and variety, tension and release) in a musical selection; give examples of other works that make similar uses of these devices and techniques**

Possible links to: Art - color, line, form, space, texture, balance, rhythm, harmony, emotional, meaning; Comprehensive Health/Dance - time, force, energy, rhythm, motion, movement, kinesiology

- **3AM-P3. Explain ways in which the principles and subject matter of various disciplines outside the arts are interrelated with those of music**

PO 1. Identify skills needed in other disciplines

PO 2. Identify skills needed for student discipline

PO 3. Compare/contrast previously identified skills (e.g., science and acoustics, breathing and anatomy, tone, color and visual arts)

- **3AM-P4. Identify specific criteria for making informed, critical evaluations of the quality and effectiveness of performances, compositions, arrangements and improvisations; apply these criteria to personal participation in music**
- **3AM-P5. Compare the materials, technologies, media and processes of music with those of other arts disciplines and subject areas to create and analyze artworks**

- **3AM-P6. Evaluate a performance, composition, arrangement or improvisation by comparing it to similar or exemplary models**

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **3AM-D1. Interpret musical selections through original writing, original dance movement or original visual art**
- **3AM-D2. Demonstrate independent artistic judgment in devising criteria for evaluating one's own performances and compositions**
- **3AM-D3. Compare ways in which musical materials are used in a given example to ways in which they are used in other works of the same genre or style**
- **3AM-D4. Evaluate a given musical work in terms of its aesthetic qualities and explain the musical means used to evoke feelings and emotions**
- **3AM-D5. Compare the uses of characteristic elements, artistic processes, and organizational principles among music forms and the other arts disciplines in different historical periods and different cultures**

VISUAL ARTS

STANDARD 1: CREATING ART (Visual Arts)

Students know and apply the arts, disciplines, techniques and processes to communicate in original or interpretive work.

(Proficiency Grades 9-12)

- **1AV-P1. Create works of art that apply media, techniques and processes with controlled skill, craftsmanship, confidence, understanding and sensitivity**

PO 1. Apply media, techniques and processes with controlled skill in artwork

PO 2. Create artwork demonstrating skill and craftsmanship and a sensitivity to the media

PO 3. Assess progression of skill, craftsmanship, confidence, understanding and sensitivity through an established criteria in own artwork

Possible links to: Mathematics – measurements; Science - properties of materials; Technology - use of technical equipment

- **1AV-P2. Demonstrate extensive knowledge of skills and techniques in at least one visual art form**

PO 1. Explain the skills and techniques necessary to complete an artwork in one visual art form

PO 2. Demonstrate proficiency of various techniques within the chosen visual art form

PO 3. Produce a body of artwork demonstrating an extensive knowledge of skills and techniques in a particular visual art form

Possible links to: Language Arts - artist statements; Technology - use of tools and materials

- **1AV-P3. Reflect on and articulate reasons for artistic decisions**

PO 1. State reasons for making artistic decisions

PO 2. Evaluate the success or areas for improvement seen in the artwork

PO 3. Justify the evaluation of the artwork

Possible links to: Language Arts - oral or written presentation; Social Studies – cultural/historic influences; Technology - use of appropriate programs

- **1AV-P4. Sustain a portfolio of created work demonstrating the progression of knowledge and skills**

PO 1. Develop a portfolio that reflects a progression of work related to a specific criteria of knowledge and skills

PO 2. Analyze the knowledge and skills illustrated in the portfolio

PO 3. Evaluate the success of the portfolio based on the identified knowledge and skills

Possible links to: Language Arts - writing skills; Science - scientific innovations; Technology - media used to sustain portfolio

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **1AV-D1. Create, on a regular basis, inventive works of art which solve environmental, industrial, technological and commercial problems**
- **1AV-D2. Initiate, define and solve challenging visual arts problems using analysis, synthesis and evaluation**
- **1AV-D3. Communicate ideas regularly at a high level of effectiveness in at least one visual arts medium**

- **1AV-D4. Create multiple solutions to specific visual arts problems that demonstrate a high level of competence in producing effective relationships between visual form and expression**
- **1AV-D5. Create a public exhibit of one's own artwork which reflects personal growth as an artist**

STANDARD 2: ART IN CONTEXT (Visual Arts)

Students demonstrate how interrelated conditions (social, economic, political, time, and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts

(Proficiency Grades 9-12)

- **2AV-P1. Analyze and interpret how elements of time and place influence the visual characteristics, content, purpose and message of works of art**

PO 1. Determine the factors responsible for influencing works of art

PO 2. Analyze the ways in which a work of art expresses a point of view of the time and place in which it was created

*Possible links to: Language Arts - articulation, reading to research time and place;
Social Studies - time and place influence; Technology - tools and materials used;
Workplace Skills - infer and evaluate content*

- **2AV-P2. Describe the function and meaning of specific art objects within varied cultures, times and places**

PO 1. Research a specific art object for its function and meaning within the culture chosen

PO 2. Compare and contrast the function or meaning of similar art images/objects of various cultures and times

PO 3. Compare images used today, from various times and cultures, for purposes and meanings other than originally intended

*Possible links to: Language Arts – articulation; Social Studies - context issues;
Technology - media and tools used, research using electronic media*

- **2AV-P3. Analyze and interpret how technological and scientific advances in the visual arts and other disciplines (e.g., humanities, science, mathematics) influence the creation of work**

PO 1. Classify technological and scientific advancements within a given time period

PO 2. Identify artworks relevant to those technological and scientific advancements

- PO 3. Debate the significance of the advancements as they influence the creation of works
- PO 4. Predict possible influences of future advancements in technology and science on the creation of artwork
- PO 5. Defend their hypothesis based on current and historical trends within art

Possible links to: Language Arts – articulation; Mathematics - statistics and data; Science - advances in Science; Social Studies - historical references; Technology - advances in technology, use as research tool

- **2AV-P4. Identify and evaluate the role of the visual arts and artists in business, industry, technology and the community**

- PO 1. Identify the roles of artists in business, industry, technology and the community
- PO 2. Evaluate the roles of artists in business, industry, technology and the community
- PO 3. Identify the roles of the visual arts in business, industry, technology and the community
- PO 4. Evaluate the roles of the visual arts in business, industry, technology and the community

Possible links to: Language Arts - articulation, read research; Social Studies - art in politics; Workplace Skills - career awareness

- **2AV-P5. Analyze contemporary art issues and influences on own work and that of others**

- PO 1. Identify contemporary issues that exist in art (e.g., through schools, museums, galleries, internet access and art critics)
- PO 2. Recognize influences of contemporary art issues in their collected body of artworks
- PO 3. Articulate the influences of contemporary art issues in their collected body of work

Possible links to: Language Arts - articulation, research; Social Studies - art in contemporary politics, censorship issues; Workplace Skills - career awareness

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **2AV-D1. Analyze the origins of specific images in the visual arts and explain their importance and influence**
- **2AV-D2. Analyze and interpret common and divergent characteristics of artworks evident across time and among cultural groups to formulate analyses, evaluations and interpretations of meaning**

- **2AV-D3. Compare own analysis and interpretation of the visual arts with those made by critics, historians, aestheticians and artists**

STANDARD 3: ART AS INQUIRY (Visual Arts)

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

(Proficiency Grades 9-12)

- **3AV-P1. Identify and critique the reasons for the success or need for improvement in a progression of their own works**

- PO 1. Identify the reasons for success in one's own artwork
- PO 2. Justify the reasons for success in one's own artwork
- PO 3. Evaluate the need for improvement in one's own artwork
- PO 4. Synthesize the information into a progression of one's own works

Possible links to: Language Arts – articulation; Workplace Skills - analyze complex problems

- **3AV-P2. Compare and explain the power of the visual arts to communicate universal concepts (e.g., love, birth, death, truth, fear) throughout time and across cultures**

- PO 1. Identify the characteristics of the visual arts to communicate universal concepts throughout time and across cultures
- PO 2. Use the characteristics of universal concepts to explain a particular artwork
- PO 3. Compare the power of the visual arts to communicate universal concepts

Possible links to: Language Arts – articulation/universal concepts; Mathematics - data analysis; Other arts - universal concepts in other art forms; Science - scientific processes; Social Studies - historical references; Technology - communication

- **3AV-P3. Identify intentions of those creating artworks, compare the implications of the various purposes, and justify analysis of purposes in particular works**

- PO 1. Identify and analyze an artist's intentions in an artwork
- PO 2. Justify the analysis of the artist's intention
- PO 3. Compare the implications of the intent of various artworks

Possible links to: Language Arts - articulation, interpretation; Social Studies - social, political, economic implications; Technology - communication, research tools

- **3AV-P4. Compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines and subject areas to create and analyze artworks**

PO 1. Identify connections (material, technologies, media, and processes) in the visual arts with other arts disciplines and subject areas

PO 2. Analyze artworks to determine connections (material, technologies, media, and processes) between disciplines

PO 3. Analyze the use of material, technologies, media, and processes among other disciplines in the creation of works of art

Possible links to: All content areas

- **3AV-P5. Analyze and interpret the effectiveness of contemporary artistic expressions in at least one visual art form, school, or style**

PO 1. Interpret the artistic expressions in at least one contemporary visual art form, school/movement, or style (e.g., art form, painting; school/movement, Abstract Expressionism; style, action painting [Jackson Pollock], color field painting [Rothko])

PO 2. Analyze the effectiveness of contemporary artistic expressions in at least one visual art form, school/movement, or style

Possible links to: Language Arts – articulation; Mathematics - data analysis, charts, graphs; Social Studies - historical context of social, political, economic, geographic influences; Technology - communication, research tools

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **3AV-D1. Demonstrate the ability to compare two or more perspectives concerning the use of organizational principles and functions in the visual arts**
- **3AV-D2. Analyze the unique characteristics of aesthetic perception as compared with those of general perception, which is only concerned with an immediate like or dislike of an image**
- **3AV-D3. Demonstrate the ability to make refined and subtle discriminations when analyzing works of art by one's self and/or works by others**
- **3AV-D4. Analyze and critique (e.g., using descriptors, analogies and metaphors) prominent works of art and the work of emerging artists, using technology as one means of doing so**

THEATRE

STANDARD 1: CREATING ART (Theatre)

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

(Proficiency Grades 9-12)

- **1AT-P1. Construct original scripts and collaborate with actors to refine scripts so that story and meaning are conveyed to an audience**

PO 1. Construct an original or adapted dramatic piece or monologue, scene, or short play
THAT DEVELOPS CHARACTER, HUMAN INTERACTION, CONFLICT AND RESOLUTION

PO 2. Use collaboration among playwright, actors, director and designers to develop and rewrite the text

*Possible links to: Language Arts - writing, formatting, reading strategies;
Workplace Skills - problem solving, collaboration*

- **1AT-P2. Compare and demonstrate various acting techniques and methods, individually or in an ensemble, to create and sustain characters that communicate with audiences**

PO 1. Compare, in writing, various acting techniques and methods (e.g., classical style, Commedia del Arte, Constantin Stanislavski, Sanford Meisner, Viola Spolin, Dorothy Heathcote)

PO 2. Demonstrate at least two acting techniques and/or methods

PO 3. Use imaginative movement, gesture, and vocalization to communicate subtext

PO 4. Use character analysis to create believable characters in at least two different acting styles

Possible links to: Dance – movement; Language Arts - writing skills; Social Studies - history

- **1AT-P3. Analyze a variety of dramatic texts from cultural and historical perspectives to determine production requirements and develop designs that use visual and aural elements to convey environments that clearly support the text**

Possible links to: Language Arts - writing skills; Social Studies - history, cultural similarities and differences

- **1AT-P4. Apply technical knowledge and skills to safely create functional scenery, properties, lighting, sound, costumes, and makeup**

PO 1. Follow established safety regulations

PO 2. Use technical and design knowledge, keeping in mind budgetary considerations, to design, construct, or operate scenery; design, mount, or control lighting; select, record, and control sound; select, design, construct, or alter costumes; design, apply make-up

*Possible links to: Technology - use of equipment, read/follow directions;
Workplace Skills - problem solving, marketable skills, technical vocabulary*

- **1AT-P5. Lead small groups in researching and planning a scene and rehearsing the scene for performance**

PO 1. Analyze text for physical, social, and psychological dimensions of the characters

PO 2. Research and conceptualize a scene or play (as director and designer)

PO 3. Direct a scene or play (e.g., blocking, staging, characterization)

PO 4. Use rehearsal techniques (e.g., memorization, pacing, polishing work) to prepare for a presentation

Possible links to: Workplace skills - leadership skills, group dynamics

- **1AT-P6. Develop and sustain a portfolio of created work demonstrating the progression of knowledge and skills**

PO 1. Organize the components of a portfolio including résumé, head shot, letters of recommendation, and samples of designs

PO 2. Use self assessment skills to demonstrate improvement

Possible links to: Workplace Skills - organization, marketable skills

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **1AT-D1. Write theatre, film, television or electronic media scripts in a variety of traditional and new forms that include original characters with unique dialogue that motivates action**

Possible links to: Language Arts – writing; Technology – electronic information

- **1AT-D2. Work in an ensemble to create characters for classical, contemporary, realistic, and non-realistic improvisations and scripted plays for the theatre, film, television and/or electronic media productions**

Possible links to: Language Arts – reading; Social Studies – history; Workplace Skills – collaboration

- **1AT-D3. Research and use cultural, historical and symbolic clues to develop an interpretation and visual and sound production choices for an improvisational or scripted scene; justify these choices; then collaborate as a member of a production team (e.g., as director, designer/technician or actor) to develop aesthetically unified production concepts for classroom or formal theatre, film, television and/or electronic media production**

Possible links to: Language Arts – research; Social Studies – history, culture; Visual Arts – elements and principles of design; Workplace Skills – collaboration

STANDARD 2: ART IN CONTEXT (Theatre)

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

(Proficiency Grades 9-12)

- **2AT-P1. Research and use cultural, historical, and symbolic clues to develop an interpretation of and to make visual and sound production choices for an improvisation or scripted scene; justify these choices**

PO 1. Research historical context of a script as a basis for interpretation and design

PO 2. Research pertinent cultural, social and political conditions as a basis for interpretation and design

PO 3. Explain the relationship between stage configuration, script requirements, and acting styles in different historical periods

PO 4. Design/choose appropriate visual and sound elements for an improvisation/scripted scene

- **2AT-P2. Compare how similar themes are treated in drama of different genres and styles from various cultural and historical periods; illustrate with classroom performances and discuss how theatre can reveal universal concepts**

PO 1. Research and explain different theatrical approaches to themes as a basis for production concepts

PO 2. Perform scripted scenes or improvisations from at least two different genres/styles (e.g., historical: Greek, Noh, Elizabethan, Commedia del Arte, Ritual Drama; genre: tragedy, farce, melodrama, realism, absurdism)

- **2AT-P3. Identify and compare the lives, works and influences of representative theatre artists in several cultures and historical periods**

PO 1. Identify representative theatre artists in several cultures and historical periods (e.g., playwrights: Aristophanes, William Shakespeare, Henrik Ibsen, David Henry Hwang; actors: Thespis, Marcel Marceau, Sarah Bernhardt, Sidney Poitier; directors: Julie Taymore, Steven Spielberg; designers: Ming Cho Lee, Ben Nye)

PO 2. Compare the lives, works, and influences of representative theatre artists

Possible links to: Foreign Language - culture, language

- **2AT-P4. Analyze the effects of their own cultural experiences on their dramatic work; explain how culture affects the content and production values of theatre, television and films created by others**

PO 1. Identify one's own cultural experiences

PO 2. Use understanding of personal culture to analyze its effect on one's own dramatic work

PO 3. Analyze the influence of at least two other cultures on the content and production values of theatre, television, and film

Possible links to: Foreign Language – culture

- **2AT-P5. Analyze and interpret how technological and scientific advances in theatre and other disciplines (e.g., humanities, science, mathematics) influence the creation of work**

PO 1. Identify the effect technological and scientific advances (e.g., electricity, wireless microphones, the computer) have had on design and production in theatre and other disciplines

PO 2. Evaluate the technical aspects of a production as determined by spectacle demands/needs of script

PO 3. Incorporate the use of technological advances in theatre and other disciplines in creating theatre

Possible links to: Science - scientific advances; Social Studies – history; Technology – analysis

(Distinction - Honors)

Option: Performance or Technical

Students know and are able to do all of the above and the following:

- **2AT-D1. Research, describe and implement appropriate historical and contemporary production designs, techniques and performances from various cultures for classroom and formal theatre, film, television and/or electronic media productions**
- **2AT-D2. Analyze the social and aesthetic impact of underrepresented theatre, film, television and electronic media artists**
- **2AT-D3. Compare the interpretive and expressive natures of several theatre forms in specific cultures or historical periods**
- **2AT-D4. Analyze the relationships among cultural values, freedom of artistic expression, ethics and artistic choices in various cultures and historical periods**
- **2AT-D5. Analyze the development of dramatic forms, production practices, and theatrical traditions across cultures and historical periods; explain influences on contemporary theatre, film, television and electronic media productions**
- **2AT-D6. Compare and contrast the roles of theatre, film, television and electronic media in the present and in the past**

STANDARD 3: ART AS INQUIRY (Theatre)

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others.

(Proficiency Grades 9-12)

- **3AT-P1. Construct social meanings from classroom and formal productions from a variety of cultural and historical periods, and relate to current personal, national and international issues**

- PO 1. Explain the relationship between a production's concept and current personal, national and/or international issues
- PO 2. Compare a production's concept with its original historical and cultural context
- PO 3. Analyze theatre's capacity for societal and personal self-examination and change
- PO 4. Compare the theatre arts (e.g., theatre, film, television) to the society which created them

- **3AT-P2. Develop criteria for analyzing and evaluating script, acting, design, and direction based on artistic choices in traditional theatre, film and new art forms**

- PO 1. Develop appropriate criteria for artistic analysis and evaluation of script, acting, design, and direction
- PO 2. Use personally developed criteria to evaluate the overall quality of a production

Possible links to: Workplace Skills - critical thinking

- **3AT-P3. Analyze, critique, and refine the whole and the parts of dramatic performances taking into account the context, and constructively suggest alternative artistic choices**

- PO 1. Analyze, in context, the separate elements (e.g., acting, costuming, lighting, directing) of a dramatic performance
- PO 2. Critique the impact of each of these elements on the production as a whole
- PO 3. Suggest and justify alternative artistic choices and predict their effects on the production

- **3AT-P4. Compare the materials, technologies, media, and processes of theatre with those of other arts disciplines and subject areas to create and analyze artworks**

- PO 1. Compare and contrast theatre materials, media, technologies, and processes with other art forms
- PO 2. Create a performance or design that integrates typical theatre techniques with the techniques of at least one other arts discipline

(Distinction – Honors)

Option: Performance or Technical

Students know and are able to do all of the above and the following:

- **3AT-D1. Construct personal meanings from non-traditional dramatic performances**
- **3AT-D2. Critique several dramatic works in terms of other aesthetic philosophies (e.g., Greek drama, French classicism with its unities of time and place, Shakespeare, romantic form, India's classical drama, Japanese Kabuki, modern performance arts)**

- **3AT-D3. Analyze and evaluate critical comments about personal dramatic work, explaining which points are most appropriate to use for further development of the work**

DANCE

STANDARD 1: CREATING ART (Dance)

Students know and apply the arts disciplines, techniques and processes to communicate in original or interpretive work.

(Proficiency Grades 9-12)

- **1AD-P1. Demonstrate a synthesis of skeletal alignment, articulation of body parts, strength, flexibility, agility, and coordination in locomotor and nonlocomotor/ axial movements**

PO 1. Perform a complex movement combination which remains stationary

PO 2. Perform a complex movement sequence which travels through space

Possible link to: Science - interdependence

- **1AD-P2. Demonstrate rhythmic acuity and projection while performing dance skills**

PO 1. *DANCE A MOVEMENT PHRASE TO VARIOUS RHYTHMS/METERS*

PO 2. Identify the rhythmic structure of various musical examples

PO 3. Demonstrate artistic expression (e.g., confidence, energy) while performing a movement phrase or dance

- **1AD-P3. Create and perform combinations in a variety of dynamic ranges and movement qualities**

PO 1. Choreograph dance combinations utilizing varied ranges of space, time, and/or force

PO 2. Demonstrate several movement qualities in a choreographed work

- **1AD-P4. Expand kinesthetic memory to include extended movement sequences**

PO 1. Demonstrate the ability to vary movement sequences (e.g., reverse, rewind)

PO 2. Explore a series of progressively longer movement sequences

PO 3. Perform a complete dance

- **1AD-P5. Identify and demonstrate a greater length and complexity of steps and patterns from at least two different dance styles/traditions**

PO 1. Identify steps and patterns from specific dance style

PO 2. Demonstrate at least two combinations in different styles, using complex steps and patterns

- **1AD-P6. Identify and demonstrate a range of choreographic processes (e.g., transition, contrast), structures, and forms (e.g., AB, ABA, canon, theme and variation, chance)**

PO 1. Use various processes to choreograph (e.g., music first vs. movement first)

PO 2. Determine the climactic moment within the structure of a complete movement phrase

PO 3. Identify choreographic form presented

PO 4. CHOREOGRAPH USING VARIOUS FORMS

Possible link to: Mathematics - sets and logic

- **1AD-P7. Develop and sustain a portfolio of created works demonstrating the progression of knowledge and skills**

PO 1. Select a variety of samples for a journal, video collage, scrapbook, or résumé of dance development

Possible link to: Language - personal narrative

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **1AD-D1. Demonstrate technical skills consistently and reliably with artistic expression including clarity, musicality and stylistic nuance appropriate for various dance styles (e.g., ballet, modern and jazz techniques)**
- **1AD-D2. Choreograph a group dance with coherence and aesthetic unity; design costuming, lighting and stage settings that enhance the choreography**

STANDARD 2: ART IN CONTEXT (Dance)

Students demonstrate how interrelated conditions (social, economic, political, time and place) influence and give meaning to the development and reception of thought, ideas and concepts in the arts.

(Proficiency Grades 9-12)

- **2AD-P1. Explain how movement choices communicate abstract ideas in dance**

PO 1. Interpret movements that express various feelings and/or ideas

PO 2. Observe and interpret a dance through verbal or written expression

Possible link to: Language - verbal expression, written expression

- **2AD-P2. Create a dance that effectively communicates a contemporary social theme**

PO 1. Create an original dance with movements influenced by the traditions of a particular culture

PO 2. Choreograph a dance based on a theme

- **2AD-P3. Select at least two contemporary theatrical forms of dance; demonstrate and describe their similarities and differences**

PO 1. Identify and describe dance styles that are currently seen on TV or stage

PO 2. Compare contemporary dance styles

PO 3. Create movement sequences using different contemporary dance styles

- **2AD-P4. Demonstrate and discuss the traditions and techniques of classical dance forms**

PO 1. Research the traditions of a classical dance form

PO 2. Compare and contrast classical dance forms

PO 3. Create a movement sequence in one classical dance form, then change the same sequence to another classical dance form (e.g., ballet, jazz, modern)

- **2AD-P5. Analyze and interpret how technological and scientific advances in dance and other disciplines (e.g., humanities, science, mathematics) influence the creation of work**

PO 1. Research technological advances in dance

PO 2. Research technological advances in other art forms

PO 3. Analyze how technological advances have influenced the evolution of dance

- **2AD-P6. Discuss how skills developed in dance are applicable to a variety of careers**

PO 1. Identify possible career choices related to dance

PO 2. List skills that are developed through the study of dance and how they relate to other career fields

- **2AD-P7. Describe historical differences of two or more dance styles (e.g., social, folk, theatrical)**

PO 1. Research two dance styles; list differences

PO 2. Research the evolution of two or more dance styles

PO 3. Examine and identify the influence historical events have on the development of dance

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **2AD-D1. Describe how a choreographer manipulates, develops and arranges the basic movement content in a dance**
- **2AD-D2. Analyze the style of a choreographer or a cultural form**
- **2AD-D3. Analyze issues of heritage, gender, social/economic class, age and/or disability in relation to dance**
- **2AD-D4. Analyze twentieth century dance events in their social, historical, cultural and political contexts**
- **2AD-D5. Compare and contrast the roles and significance of dance in at least two different social, historical, cultural and political context**

STANDARD 3: ART AS INQUIRY (Dance)

Students demonstrate how the arts reveal universal concepts and themes. Students reflect upon and assess the characteristics and merits of their work and the work of others

(Proficiency Grades 9-12)

- **3AD-P1. Explain how personal experience influences the interpretation of a dance**

PO 1. Write a personal interpretation of a dance

PO 2. Compare interpretational differences of a dance

PO 3. Justify individual response(s) to a dance

- **3AD-P2. Create a dance and revise it over time, articulating the reasons for artistic decisions and what was lost and gained by those decisions**

PO 1. Through periodic showings of original choreography, articulate reasons for changes

PO 2. Keep a journal throughout the choreographic process

Possible link to: Workplace Skills – revision

- **3AD-P3. Identify specific criteria for making informed critical evaluations of the quality and effectiveness of performances, choreography, and improvisations; apply these criteria to personal participation in dance**

PO 1. List the qualities of a good performer and use as an evaluation checklist

PO 2. List the qualities of a well-structured dance and use as an evaluation checklist

PO 3. List the qualities of a successful improvisation and use as an evaluation checklist

- **3AD-P4. Analyze the role of dance in contemporary society**

PO 1. Research dance in contemporary society

PO 2. Identify the roles of dance in today's society

PO 3. Debate the roles of several dance styles in contemporary society

- **3AD-P5. Reflect upon personal progress (e.g., skill development, personal growth) in performing dance and refine technique through self-evaluation and critiquing**

PO 1. Set and manage goals

PO 2. Analyze personal dance progress

PO 3. Develop strategies to improve dance skills

Possible link to: Workplace Skills - personal growth

- **3AD-P6. Compare the materials, technologies, media and processes of dance with those of other arts disciplines and subject areas to create and analyze artworks**

PO 1. Select materials, technologies, media or processes from other subject areas and determine relationships to dance

PO 2. View a performance/showing of another art form and use aesthetic criteria from dance to evaluate it

PO 3. Create a dance incorporating other art forms or subject areas

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **3AD-D1. Examine ways that a dance creates and conveys meaning by considering the dance from a variety of perspectives**
- **3AD-D2. Evaluate dances on the basis of aesthetic criteria such as the skill of performers, originality, visual and/or emotional impact, variety and contrast**
- **3AD-D3. Compare and contrast how personal intent is communicated in choreographic work**

ARTS GLOSSARY

AB A two-part compositional form with an A theme and a B theme; the binary form consists of two distinct, self-contained sections that share either a character or quality, such as the same tempo, movement quality, or style. [M, D]

ABA A three-part compositional form in which the second section contrasts with the first section. The third section is a restatement of the first section in a condensed, abbreviated or extended form. [M, D]

Abstract Not representational. Removed from the representative, yet retaining the essence of the original. [D, M, T, V]

Action The core of a theatre piece; the sense of forward movement created by the sense of time and/or the physical and psychological motivations of characters. [T]

Aesthetics A branch of philosophy that focuses on the nature of beauty, the nature and value of art, and the inquiry processes and human responses associated with those topics. [D, M, T, V]

Aesthetic Criteria Criteria developed about the visual, aural and oral aspects of the witnessed event, derived from cultural and emotional values and cognitive meaning. [D, M, T, V]

Aesthetic Qualities The perceptual aspects, emotional values and cognitive meanings derived from interpreting a work of art; the symbolic nature of art. [D, M, T, V]

Alignment The relationship of the skeleton to the line of gravity and the base of support. [D, V]

Alla breve The meter signature indicating the equivalent of 2/2 time. [M]

Articulation In performance, the characteristics of attack and decay of tones and the manner and extent to which tones in sequence are connected or disconnected. [D, M]

Artistic Choices Selections made by artists about situation, action, direction and design in order to convey meaning. [D, M, T, V]

Art Form Graphic or visual representation usually distinguished by process (i.e. painting, drawing, sculpture, photography) [V]

Note: Legend D-Dance, M-Music, T-Theatre. V-Visual Arts

Art Media Material used in the creation and study of visual art, such as paint, clay, cardboard, canvas, film, videotape, models, watercolors, wood and plastic. [V]

Aural Having to do with the ear or the sense of hearing. [D, M]

Axial Movement Any movement that is anchored to one spot by a body part, using only the available space in any direction without losing the initial body contact. Movement is organized around the axis of the body rather than designed for travel from one location to another; also known as nonlocomotor movement. [D]

Call and Response A structure that is most often associated with African music and dance forms, although it is also used elsewhere. One soloist/group performs with the second soloist/group entering “in response” to the first. [D, M]

Canon Choreographic form that reflects the musical form of the same name, in which individuals and groups perform the same movement/phrase beginning at different times. [D, M]

Character A created being in a drama. [T]

Characterization The creative process whereby an actor understands the fundamental personality of a part and then projects it to the audience in such a way that the character becomes a living, convincing human being. [T]

Choreography, Choreographic Describes a dance sequence that has been created with specific intent. [D]

Classical A dramatic form and production technique(s) considered of significance in earlier times, in any culture or historical period. [D, M, T, V]

Classroom Instruments Instruments typically used in the general music classroom (e.g., recorder-type instruments, chorded zithers, mallet instruments, simple percussion instruments, fretted instruments, keyboard instruments and electronic instruments). [M]

Classroom Production The exploration of all aspects (e.g., visual, oral, aural) of a dramatic work in a classroom setting where experimentation is emphasized. Classmates and teachers are the usual audience. [T]

Clef One of the three symbols that indicate the location on the staff of G above Middle C, Middle C or F below Middle C. [M]

Constructed Meaning The personal understanding of dramatic/artistic intentions and actions and their social and personal significance, selected and organized from the aural, oral and visual symbols of a dramatic production. [T]

Context A set of interrelated conditions (e.g., social, economic, political) that influence the context and give meaning to the reception of thoughts, ideas, or concepts and specific cultures and eras. [D, M, T, V]

Criticism Describing and evaluating the media, processes and meanings of works, and making comparative judgments. [D, M, T, V]

Drama A literary composition intended to portray life or character or to tell a story usually involving conflicts and emotions exhibited through action and dialogue, designed for theatrical performance. [T]

Dramatization The art of composing, writing, acting or producing plays. [T]

Dramatic Media Means of telling stories by way of stage, film, television, radio, laser discs or other electronic media. [T]

Dynamics, Dynamic Levels The expressive content of human movement, sometimes called qualities or effects. Dynamics manifest the interrelationships among the elements of space, time, and force/energy. Degrees of loudness. See also movement quality. [D, M]

Electronic Media Means of communication characterized by the use of technology including (but not limited to) computers, multimedia, CD-ROM, MIDI, sound boards, light boards, virtual reality, video, film. Used as tools to create, learn, explain, document, analyze, etc. [D, M, T, V]

Elements of Art Visual arts components, such as line, texture, color, form, value and space. [V]

Elements of Dance The use of the body moving in space and time with force/energy. [D]

Elements of Music Melody, rhythm, harmony, pitch, dynamics, timbre, texture, form, text or lyrics. [M]

Ensemble The dynamic interaction and harmonious blending of the efforts of many artists. [T, M]

Environment Physical surroundings that establish place, time, and atmosphere/mood; physical conditions that reflect and affect the emotions, thoughts, and actions of characters and the audience. [D, M, T, V]

Folk Work created and performed by a specific group within a culture. Generally these works originated outside the courts or circle of power within a society. [D, M, T, V]

Form The overall structural organization of a music composition (e.g., AB, ABA, call and response, rondo, theme and variations, sonata-allegro) and the interrelationships of music events within the overall structure. [M] The structural organization of a drama (e.g., plot sequence; logical, realistic use of character and time/non-realistic use of character and time. [T] An element of art that is three-dimensional and encompasses volume. [V]

Formal Production The staging of a dramatic work for presentation for an audience. [T]

Front of House Box office and lobby (i.e., business services). [T]

Found Objects Objects that are used to create elements of music that were not originally designed for music (i.e., pencil, string, rubber band). [M] Objects that were not originally considered art media that are used to create works of art (e.g., tin foil, string, wire). [V]

Genre A type or category of music (e.g., sonata, opera, oratorio, art song, gospel, suite, jazz, madrigal, march, work song, lullaby, barbershop, Dixieland). [M] A type or category of dramatic literature (e.g., comedy, tragedy, melodrama, farce, serious drama). [T]

Harmony, Harmonics Agreeable relationship between parts of a design or composition giving unity of effect or an aesthetically pleasing whole. [D, V] The combination of tones of a chord into music of three or more parts. [M]

Improvisation Movement that is created spontaneously, ranging from free form to highly structured environments, but always with an element of chance. Provides the dance with the opportunity to bring together elements quickly, and requires focus and concentration. Is instant and simultaneous choreography and performance. [D] The spontaneous use of movement and speech to create a character in a particular situation. [T] Music that is performed spontaneously either melodically or harmonically, alone or in ensemble, without written notation. [M]

Kinesphere The movement space, or the space surrounding the body in stillness and in motion, which includes all directions and levels both close to the body and as far as the person can reach with limbs or torso. [D]

Kinesthetic The sensation of movement or action in the muscles, tendons and joints in response to stimuli while dancing or viewing dance. [D]

Level of Difficulty For purposes of these standards, music is classified into six levels of difficulty:*

Level 1 Very easy. Easy keys, meters and rhythms; limited ranges.

Level 2 Easy. May include changes of tempo, key and meter; modest ranges.

Level 3 Moderately easy. Contains moderate technical demands, expanded ranges and varied interpretive requirements.

Level 4 Moderately difficult. Requires well-developed technical skills, attention to phrasing and interpretation, and ability to perform various meters and rhythms in a variety of keys.

Level 5 Difficult. Requires advanced technical and interpretive skills; contains key signatures with numerous sharps or flats, unusual meters, complex rhythms, subtle dynamic requirements.

Level 6 Very difficult. Suitable for musically mature students of exceptional competence. [M]

Locomotor Movement Movement that travels from place to place, usually identified by weight transference on the feet. Basic locomotor steps are the walk, run, leap, hop, and jump and the irregular rhythmic combinations of the skip (walk and hop), slide (walk and leap), and gallop (walk and leap). [D]

Major/Minor Key A key or tonality in the major/minor mode

Major The intervals between the scale tones are all whole steps except those between 3-4 and 7-8, which are half steps.

Minor In the natural form the intervals between the scale tones are all whole steps except those between 2-3 and 5-6, which are half steps. The more common melodic form requires a half step between 7-8 ascending, but reverts to the natural form descending. [M]

Meter The grouping in which a succession of rhythmic pulses or beats is organized; indicated by a meter signature at the beginning of a work. [M]

Meter Signature An indicator of the meter of a musical work, usually presented in the form of a fraction; the denominator indicates the unit of measurement (note) and the numerator indicates the number of units (notes) that make up a measure. [M]

MIDI (Musical Instrument Digital Interface) Standard specifications that enable electronic instruments such as the synthesizer, sampler, sequencer and drum machine from any manufacturer to communicate with one another and with computers. [M]

Motivation What a character wants and why. [T]

*Adapted with permission from the New York State School Music Association (NYSSMA) Manual, Edition XXIII, published by the NYSSMA, 1991

Movement Quality The identifying attributes created by the release, follow-through and termination of energy, which are key to making movement become dance. Typical terms denoting qualities include sustained, swing, percussive, collapse, and vibratory and effort combinations such as float, dab, punch and glide. [D]

Ostinato A short musical pattern that is repeated persistently throughout a composition. [M]

Palindrome A choreographic structure used with a phrase or longer sequence of movement in which the phrase, for example, is first performed proceeding from the first movement to the second movement; when the last movement of the phrase is completed, the phrase is retrograded from the penultimate movement to the first movement. (A commonly used example in prose is “Able was I ere I saw Elba.” In this example, the letters are the same forward to the “r” in “ere” as they are backward to that “r.”) [D]

Pantomime Originally a Roman entertainment in which a narrative was sung by a chorus while the story was acted out by dancers. Now used loosely to cover any form of presentation, which relies on dance, gesture and physical movement without the use of the voice. [D, T]

Pentatonic A musical scale using only five tones with a minor third between three and four, all other intervals being whole steps. [M]

Perception Sensory awareness, discrimination and integration of impressions, conditions and relationships with regard to objects, images and feelings. [V]

Portfolio collected evidence of a student’s progress in the visual arts. [V]

Principles of Design Underlying characteristics in the visual arts and theatrical design, such as reception, balance, emphasis, contrast and unity. [T, V]

Process A complex operation involving a number of methods or techniques (e.g., addition or subtraction processes in sculpture; etching and intaglio processes in printmaking; casting or constructing processes in making jewelry). [V]

Process of Critiquing A strategy which enables a viewer to assess works of art through perceiving, analyzing and discussing its properties and qualities (e.g., Broudy’s Aesthetic Scanning, Anderson’s Form & Context, the Feldman Approach, the Mittler Approach, and Parsons Model). [V]

Projection A confident presentation of one’s body and energy to communicate vividly meaning to an audience. [D, M, T]

Range The whole ascending or descending series of sounds capable of being produced by a voice or instrument. [M The scope or extent of one’s abilities in movement, technique, etc. [D, T]

Real Work of Art The original work of art rather than a reproduction. [V]

Rhythmic Acuity The physical expression of auditory recognition of various complex time elements. [D, M]

Role The characteristic and expected social behavior of an individual in a given position (e.g., mother, employer). Role portrayal is likely to be more predictable and one-dimensional than character portrayal (see characterization) and is appropriate for early improvisation exercises. [T]

School A group of artists located in a particular region with common theology. Some examples of schools are the New York School, the Ashcan School, the Hudson River School and the Pont Aven School. [V]

Script The written dialogue, description and directions provided by the playwright. [T]

Space The performance area used by an individual or ensemble. [D, T]
The open place between the lines of the staff. [M] The emptiness or area between, around, above, below, or within objects. [V]

Staff The five parallel horizontal lines and four spaces on which music is written. [M]

Staves Plural of staff. [M]

Style The distinctive or characteristic manner in which the elements of music are treated. In practice, the term may be applied to, for example, composers (the style of Copland), periods (Baroque style), media (keyboard style), nations (French style), form or type of composition (fugal style, contrapuntal style), or genre (operatic style, bluegrass style). [M] A distinctive manner of moving; the characteristic way dance is done, created or performed that identifies the dance of a particular performer, choreographer or period. [D] The manner in which a play is written or performed (e.g., classical, Shakespearean, realistic, absurdist). [T] An artist's characteristic manner of expression. Also, works of art by a group of artists with commonalities in their work such as impressionistic, expressionistic, realistic and surrealist. [V]

Symbol An image, object, sound or movement that stands for or represents something else. [D, M, T, V]

Technical Skills The ability to perform with appropriate timbre, intonation, breath support, articulation, and diction and to play or sing the correct pitches and rhythms. [M]

Techniques Specific methods or approaches used in a larger process (e.g., graduation of value or hue in painting; conveying linear perspective through overlapping, shading, or varying size and color). [V]

Technology Electronic media (e.g., video, computers, compact discs, lasers, audio tape, satellite equipment) used as tools to create, learn, explain, document, analyze, or present artistic work or information. [D, M, T, V]

Tempo The rate of speed at which a performance or elements of a performance occur. [D, M, T]

Tension The atmosphere created by unresolved, disquieting or inharmonious situations that human beings feel compelled to address. [M, T] A design created by unresolved, disquieting or inharmonious shapes or elements. [V]

Text The basis of dramatic activity and performance; a written script or an agreed-upon structure and content for improvisation. [T] The words or lyrics of a piece of vocal music. [M]

Theatre Literacy The ability to create, perform, perceive, analyze, critique and understand dramatic performances. [T]

Theatre The imitation/representation of life, performed for other people; the performance of dramatic literature, drama; the milieu of actors and playwrights, the place that is the setting for dramatic performances. [T]

Timbre The character or quality of a sound that distinguishes one instrument, voice or other sound source from another. [M]

Tonality The harmonic relationship of tones with respect to a definite center or point of rest; fundamental to much of Western music circa 1600. [M]

Tools Instruments and equipment used by students to create and learn about art, such as brushes, scissors, brayers, easels, knives, kilns and cameras. [V]

Transposition A change in a composition, either in the transcript or the performance, into another key. [M]

Value The significance of an idea to an individual or group.

Visual Arts Problems Specific challenges based on thinking about and using visual arts components. [V]

Warm Up Movements and/or movement phrases designed to raise the core body temperature and bring the mind into focus for the activities to follow. [M, T, D]

Comprehensive Health Standards 1997

Proficiency (Grades 9-12)

Comprehensive Health Rationale

Parents and Guardians

It is understood that parents and guardians are the primary educators in their children's health; therefore, it is important to include the applicable statutes and state Board of Education rule in the comprehensive health education standards. Parents and guardians must be provided opportunities to preview school district policies, curriculum and take-home materials.

The ultimate goal of comprehensive health education is to help young people in Arizona achieve their fullest potential by attaining their highest level of health and wellness as students and adults. Basic to health education is the knowledge about the importance of the interrelationships of physical, behavioral, and social well-being and the prevention of diseases and other health problems. Students should learn to accept responsibility for personal health decisions and practices, work with others to maintain a healthy environment, as well as become informed consumers.

Rationale for Standard 1: Students comprehend concepts related to health promotion and disease prevention.

Comprehension of health promotion strategies and disease prevention concepts enables students to become health literate, self-directed learners, which establishes a foundation for leading healthy and productive lives.

Rationale for Standard 2: Students demonstrate the ability to access accurate health information.

Accessing valid health information and health promoting products and services is important in the prevention, early detection and treatment of most health problems. Applying skills of information analysis, organization, comparison, synthesis and evaluation to health issues provides a foundation for individuals to move toward becoming health literate and responsible, productive citizens.

Rationale for Standard 3: Students demonstrate the ability to practice health-enhancing behaviors and reduce health risks.

Research confirms that many diseases and injuries can be prevented by reducing harmful and risk-taking behaviors. Accepting responsibility and practicing health-enhancing behaviors can contribute to a positive quality of life.

Rationale for Standard 4: Students analyze the influence of culture, media, technology and other factors on health.

Health is influenced by a variety of factors that coexist within society. The ability to analyze, evaluate and interpret the influence of culture, media and technology on health is important in a rapidly changing world. The health literate, responsible and productive citizen draws upon the contributions of these factors to strengthen individual, family and community health.

Rationale for Standard 5: Students demonstrate the ability to use interpersonal skills to enhance health.

Personal, family and community health are enhanced through effective communication. The ability to organize and to convey information, beliefs, opinions, and feelings (both verbal and nonverbal) are skills that strengthen interactions and can reduce or avoid conflict. When communicating, individuals who are health literate demonstrate care, consideration, and respect for self and others.

Rationale for Standard 6: Students demonstrate the ability to use goal setting and decision-making skills to enhance health.

Decision-making and goal setting are essential lifelong skills needed to implement and sustain health-enhancing behaviors. These skills make it possible for individuals to transfer health knowledge into healthy lifestyles, thus improving the quality of life.

Rationale for Standard 7: Students demonstrate the ability to advocate for personal, family and community health.

Quality of life is dependent on an environment that protects and promotes the health of individuals, families and communities. Responsible citizens who are health literate communicate and advocate for positive health in their communities.

§ 15-102. Parental involvement in the school; definition

- A. The governing board, in consultation with parents, teachers and administrators, shall develop and adopt a policy to promote the involvement of parents and guardians of children enrolled in the schools within the school district, including:
1. A plan for parent participation in the schools which is designed to improve parent and teacher cooperation in such areas as homework, attendance and discipline.
 2. Procedures by which parents may learn about the course of study for their children and review learning materials.
 3. Procedures by which parents who object to any learning material or activity on the basis that it is harmful may withdraw their children from the activity or from the class or program in which the material is used. Objection to a learning material or activity on the basis that it is harmful includes objection to a material or activity because it questions beliefs or practices in sex, morality or religion.

- B. The policy adopted by the governing board pursuant to this section may also include the following components:
1. A plan by which parents will be made aware of the district's parental involvement policy and the provisions of this section, including:
 - (a) Rights under the family educational rights and privacy act of 1974 relating to access to children's official records.
 - (b) The parent's right to inspect the school district policies and curriculum.
 2. Efforts to encourage the development of parenting skills.
 3. The communication to parents of techniques designed to assist the child's learning experience in the home.
 4. Efforts to encourage access to community and support services for children and families.
 5. The promotion of communication between the school and parents concerning school programs and the academic progress of the parents' children.
 6. Identifying opportunities for parents to participate in and support classroom instruction at the school.
 7. Efforts to, with appropriate training, support parents as shared decision makers and to encourage membership on school councils.
 8. The recognition of the diversity of parents and the development of guidelines that promote widespread parental participation and involvement in the school at various levels.
 9. The development of preparation programs and specialized courses for certificated employees and administrators that promote parental involvement.
 10. The development of strategies and programmatic structures at schools to encourage and enable parents to participate actively in their children's education.
- C. For the purposes of this section, "parent" means the parent or person who has custody of the child.

R7-2-303. Sex Education

- A. Instruction in sex education in the public schools of Arizona shall be offered only in conformity with the following requirements.
1. Common schools: Nature of instruction; approval; format.
 - a. Supplemental/elective nature of instruction. The common schools of Arizona may provide a specific elective lesson or lessons concerning sex education as a supplement to the health course study.
 - i. This supplement may only be taken by the student at the written request of the student's parent or guardian.
 - ii. Alternative elective lessons from the state-adopted optional subjects shall be provided for students who do not enroll in elective sex education.
 - iii. Elective sex education lessons shall not exceed the equivalent of one class period per day for one-eighth of the school year for grades K-4.
 - iv. Elective sex education lessons shall not exceed the equivalent of one class period per day for one-quarter of the school year for grades 5-8.

- b. Local governing board approval. All elective sex education lessons to be offered shall first be approved by the local governing board.
 - i. Each local governing board contemplating the offering of elective sex education shall establish an advisory committee with membership representative of district size and the racial and ethnic composition of the community to assist in the development of lessons and advise the local governing board on an ongoing basis.
 - ii. The local governing board shall review the total instruction materials for lessons presented for approval.
 - iii. The local governing board shall publicize and hold at least two public hearings for the purpose of receiving public input at least one week prior to the local governing board meeting at which the elective sex education lessons will be considered for approval.
 - iv. The local governing board shall maintain for viewing by the public the total instructional materials to be used in approved elective sex education lessons within the district.
 - c. Format of instruction.
 - i. Lessons shall be taught to boys and girls separately.
 - ii. Lessons shall be ungraded, require no homework, and any evaluation administered for the purpose of self-analysis shall not be retained or recorded by the school or the teacher in any form.
 - iii. Lessons shall not include tests, psychological inventories, surveys, or examinations containing any questions about the student's or his parents' personal beliefs or practices in sex, family life, morality, values or religion.
2. High Schools: Course offering; approval; format.
- a. A course in sex education may be provided in the high schools of Arizona.
 - b. The local governing board shall review the total instructional materials and approve all lessons in the course of study to be offered in sex education.
 - c. Lessons shall not include tests, psychological inventories, surveys, or examinations containing any questions about the student's or his parents' personal beliefs or practices in sex, family life, morality, values or religion.
 - d. Local governing boards shall maintain for viewing by the public the total instructional materials to be used in all sex education courses to be offered in high schools within the district.
3. Content of instruction: Common schools and high schools.
- a. All sex education materials and instruction shall be age appropriate, recognize the needs of exceptional students, meet the needs of the district, recognize local community standards and sensitivities, shall not include the teaching of abnormal, deviate, or unusual sexual acts and practices, and shall include the following:
 - i. Emphasis upon the power of individuals to control their own personal behavior. Pupils shall be encouraged to base their actions on reasoning, self-discipline, sense of responsibility, self-control and ethical considerations such as respect for self and others; and

- ii. Instruction on how to say “no” to unwanted sexual advances and to resist negative peer pressure. Pupils shall be taught that it is wrong to take advantage of, or to exploit, another person.
- b. All sex education materials and instruction which discuss sexual intercourse shall:
 - i. Stress that pupils should abstain from sexual intercourse until they are mature adults;
 - ii. Emphasize that abstinence from sexual intercourse is the only method for avoiding pregnancy that is 100 percent effective;
 - iii. Stress that sexually transmitted diseases have severe consequences and constitute a serious and widespread public health problem;
 - iv. Include a discussion of the possible emotional and psychological consequences of preadolescent and adolescent sexual intercourse and the consequences of preadolescent and adolescent pregnancy;
 - v. Promote honor and respect for monogamous heterosexual marriage; and
 - vi. Advise pupils of Arizona law pertaining to the financial responsibilities of parenting, and legal liabilities related to sexual intercourse with a minor.
- B. Certification of compliance. All districts offering a local governing board-approved sex education course of lesson shall certify, under the notarized signature of both the president of the local governing board and the chief administrator of the school district, compliance with this rule except as specified in paragraph (C). Acknowledgment of receipt of the compliance certification from the state Board of Education is required as a prerequisite to the initiation of instruction. Certification of compliance shall be in a format and with such particulars as shall be specified by the Department of Education.
- C. All districts offering state Board approved sex education lessons or courses prior to the effective date of this rule shall comply with this rule on or before June 30, 1990.

§ 15-716. Instruction on acquired immune deficiency syndrome; department assistance

- A. Each common, high and unified school district may provide instruction to kindergarten programs through the twelfth grade on acquired immune deficiency syndrome and the human immunodeficiency virus.
- B. Each district is free to develop its own course of study for each grade. At a minimum, instruction shall:
 - 1. Be appropriate to the grade level in which it is offered.
 - 2. Be medically accurate.
 - 3. Promote abstinence.
 - 4. Discourage drug abuse.
 - 5. Dispel myths regarding transmission of the human immunodeficiency virus.
- C. No district shall include in its course of study instruction which:
 - 1. Promotes a homosexual life-style.
 - 2. Portrays homosexuality as a positive alternative life-style.
 - 3. Suggests that some methods of sex are safe methods of homosexual sex.

- D. At the request of a school district, the department of health services or the department of education shall review instruction materials to determine their medical accuracy.
- E. At the request of a school district, the department of education shall provide the following assistance:
 - 1. A suggested course of study.
 - 2. Teacher training
 - 3. A list of available films and other teaching aids.
- F. At the request of a parent, a pupil shall be excused from instruction on the acquired immune deficiency syndrome and the human immunodeficiency virus as provided in subsection A of this section. The school district shall notify all parents of their ability to withdraw their child from the instruction.

Physical Activity Standards Rationale

A wealth of information has been accumulated to point to the importance of physical activity in promoting health and wellness. Evidence also indicates that habits (lifestyles) established in youth are likely to influence adult lifestyles and associated health and wellness. Physical activity, a primary risk factor for many chronic health conditions, is an integral part of comprehensive school health education but also must be promoted as an important educational goal. Meeting physical activity standards includes both promotion of physical activity among youth and promotion of lifelong physical activity that will enhance workplace skills, fitness and wellness associated with quality of life. Achieving lifetime physical activity standards results in learning real life skills. Higher order skills include decision-making and problem solving required to become informed, lifetime physical activity consumers.

Rationale for Standard 1: Students demonstrate proficiency and the achievement of higher order cognitive skills necessary to enhance motor skills.

Movement competence implies the development of sufficient ability to enjoy participation in physical activities and re-establish a foundation to facilitate continued motor skill acquisition and increased ability to engage in developmentally appropriate daily physical activities. In addition to achieving competence in a few movement forms, which increases the likelihood of lifetime activity participation, the students apply concepts from exercise science disciplines that will help them achieve independence in developing movement competence in new movement forms. The focus is on movement forms appropriate for lifetime activity involvement and the establishment of personal competence.

Rationale for Standard 2: Students comprehend basic physical activity principles and concepts that enable them to make decisions, solve problems and become self-directed lifelong learners who are informed physical activity consumers.

Accessing accurate physical activity information, products and services is important to become informed, responsible physical activity consumers.

Rationale for Standard 3: Students exhibit a physically active lifestyle.

The intent of this standard is to establish patterns of regular participation in meaningful physical activity. This standard connects what is taught in school with students' choices for physical activity outside of school. Students are more likely to participate in physical activities if they have had opportunities to develop interests that are personally meaningful to them.

Rationale for Standard 4: Students achieve and maintain a health-enhancing level of physical fitness.

The intent of this standard is for the student to achieve a health-enhancing level of physical fitness. Students should be encouraged to develop personal fitness levels above those necessary for health-enhancement, based on unique personal needs and interests and necessary for many work situations and active leisure participation. Health-related fitness components include cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition. Expectations for students' fitness levels should be established on a personal basis, taking into account variation in entry levels, rather than setting a single standard for all children at a given grade level.

Rationale for Standard 5: Students develop self-initiated behaviors that promote effective personal and social interactions in physical activity settings.

The intent of this standard is achievement of self-initiated behaviors that promote personal and group success in activity settings. Behaviors such as safe practices, adherence to rules and procedures, etiquette, cooperation and teamwork, ethical behavior in sports, and positive social interaction are necessary for all students to develop effective communication skills.

Rationale for Standard 6: Students demonstrate understanding and respect for differences among people in physical activity settings.

The intent of this standard is to develop respect for similarities and differences through positive interaction among participants in physical activity. Similarities and differences include characteristics of culture, ethnicity, motor performance, disabilities, physical characteristics (e.g., strength, size, shape), gender, race and socioeconomic status.

Rationale for Standard 7: Students develop behavioral skills (self-management skills) essential to maintaining a physically active lifestyle.

The intent of this standard is for students to develop an awareness of the intrinsic benefits of participation in lifelong physical activity. Physical activity can provide opportunities for enjoyment, physical fitness and personal challenge.

Table 1. Comprehensive Health Education Standards

STANDARD 1

Students comprehend concepts related to health promotion and disease prevention.

STANDARD 2

Students demonstrate the ability to access accurate health information.

STANDARD 3

Students demonstrate the ability to practice health-enhancing behaviors and reduce health risks.

STANDARD 4

Students analyze the influence of culture, media, technology and other factors on health.

STANDARD 5

Students demonstrate the ability to use interpersonal skills to enhance health.

STANDARD 6

Students demonstrate the ability to use goal setting and decision-making skills to enhance health.

STANDARD 7

Students demonstrate the ability to advocate for personal, family and community health.

Table 2. Physical Activity Standards

STANDARD 1

Students demonstrate proficiency and the achievement of higher order cognitive skills necessary to enhance motor skills.

STANDARD 2

Students comprehend basic physical activity principles and concepts that enable them to make decisions, solve problems and to become self-directed lifelong learners who are informed physical activity consumers.

STANDARD 3

Students exhibit a physically active lifestyle.

STANDARD 4

Students achieve and maintain a health-enhancing level of physical fitness.

STANDARD 5

Students develop self-initiated behaviors that promote effective personal and social interaction in physical activity settings.

STANDARD 6

Students demonstrate understanding and respect for differences among people in physical activity settings.

STUDENT 7

Students develop behavioral skills (self-management skills) essential to maintaining a physically active lifestyle.

ADDENDUM
A Brief Description of Ten Major Content Areas in
Comprehensive School Health Education

1. **Community Health** includes topics such as individual responsibility; healthful school, home and community environments; community health resources and facilities; official and nonofficial health agencies; health service careers; pollution control; community involvement; current issues; and trends in medical care.
2. **Consumer Health** addresses health care resources i.e., knowing what is available and how to be an educated consumer.
3. **Environmental Health** addresses individual and community responsibility, pollution, effects of environment on health, environmental protection agencies, population density, world health, waste disposal, sanitation, laws and career choices.
4. **Family Life Education** covers information about family dynamics, building relationships, child abuse, choices about relationships, family planning, parenting skills, sex education, and sexually transmitted diseases such as HIV infection and AIDS.
5. **Injury Prevention and Safety** includes learning about first aid and emergency health care and addresses the prevention of unintentional injuries. (Many schools include violence prevention and homicide as health issues within this content area.)
6. **Mental and Emotional Health** includes building self-esteem, effectively coping with stress, and communication skills, among others.
7. **Nutrition** addresses a balanced diet, food preparation, reading and understanding food labels, differences in nutritional needs for pregnant women, and more.
8. **Personal Health** includes physical fitness and lifetime activities, cardiovascular health, sleep, rest, relaxation, recreation, growth and development, oral health, vision and hearing, body systems and their functions, aging, personal wellness plans, and positive health habits and choices.
9. **Prevention and Control of Disease** addresses heart disease, stroke, diabetes, cancer, HIV/AIDS and others.
10. **Substance Use and Abuse** refers to the use and misuse of tobacco, alcohol, and other drugs and often includes topics such as positive decision-making, individual responsibility, substances beneficial to humankind, the classification of substances and their effects on the body, and the formation of habits and their influence.

The ten major content areas in this addendum are provided to assist local school districts in developing sequential curricula. It will be left to the discretion of the local district to determine the emphasis of each of the content areas. The Comprehensive Health Education and Physical Activity Standards are the required competency indicators, while the addendum is a tool to be used by school districts as a cross-reference.

COMPREHENSIVE HEALTH STANDARDS
BY LEVEL: PROFICIENCY (Grades 9-12) and DISTINCTION (Honors)

STANDARD 1

Students comprehend concepts related to health promotion and disease prevention.

(Proficiency Grades 9-12)

- **1CH-P1. Explain how behavior impacts health maintenance and disease prevention (e.g., ability to prevent homicide, suicide, accident and illness)**

- PO 1. Identify the positive and negative choices for a balanced, healthy lifestyle (e.g., poor eating habits vs. good eating habits)
- PO 2. Identify personal stress management techniques
- PO 3. Formulate methods of prevention for each of the identified causes of death among teens
- PO 4. Identify teen death statistics

- **1CH-P2. Explain the interrelationships among the mental, emotional, psychological and physical realities that occur throughout the life cycle**

- PO 1. Identify the different stages of the human life cycle (conception, prenatal, infant, toddler, preschool, school)
- PO 2. Identify the characteristics and developmental needs related to each stage of the life cycle
- PO 3. Relate the principles of healthy living to each stage of the life cycle

- **1CH-P3. Explain the impact of personal health behaviors on the functioning of body systems and describe how to delay onset and reduce risks of potential health problems**

- PO 1. Identify personal health behaviors that promote and/or detract from the functioning of body systems
- PO 2. Predict the impact of personal health behaviors that promote and or detract from the functioning of body systems (to include sleep, nutrition, exercise, sexual and substance abuse)
- PO 3. Construct a personalized continuum of health behaviors that range from more healthy to less healthy and defend rationale
- PO 4. Determine strategies to reduce health risk for more healthy behavior

- **1CH-P4. Explain how the family, peers and community influence the health of individuals**

- PO 1. Describe how problem solving skills relate to the influence that family, peers and the community have on a person's health
- PO 2. Develop a plan of how the family, peers and the community influence a person's attitudes, beliefs and feelings about health
- PO 3. Rank order from most to least influential group (family, peers, community), that impacts a person's health

- **1CH-P5. Explain how environmental health influences the community and the functions of local, state and federal resources in addressing health issues**

- PO 1. Summarize major environmental health concerns
- PO 2. List the roles and functions of agencies that address areas of environmental concern

- **1CH-P6. Identify the physiological effects of drug usage**

- PO 1. Describe major physiological effects of different classes of drugs such as the following: depressants, stimulants, hallucinogens, and inhalants
- PO 2. Cite effects of drug usage on the unborn child at various stages of development
- PO 3. List specific communicable diseases which may be transmitted by substance abuse behaviors

- **1CH-P7. Describe the relationship among an individual's abuse of substances and the impact on self, the family system, the economy and society as a whole**

- PO 1. Identify the effect of substance abuse on the individual
- PO 2. Describe the relationship between family members in a substance-abusing household
- PO 3. Describe the economic impact of substance abuse on worker productivity and national health care cost
- PO 4. Explain the relationship between substance abuse and its impact on society related to violence, to include rape and domestic violence, crime and vehicular accidents

- **1CH-P8. Identify the location and function of the reproductive organs, the fertility cycle, and the process of conception, and emphasize factors that contribute to the birth of a healthy child**

- PO 1. Describe male and female reproductive organs and understand the location and basic function of each (to include menstrual cycle)
- PO 2. Describe the association of conception to the fertility cycle

- PO 3. Describe the economic impact of substance abuse on worker productivity and national health care cost
- PO 4. Describe the major factors in family planning (e.g., personal goal setting, number of children desired, importance of timing of pregnancy, identification of available resources and family education)

- **1CH-P9. Describe proper food selection, preparation, and handling for self and others, taking into consideration that nutrient needs vary according to age, development, activity level and body type**

- PO 1. Illustrate the process of human digestion
 - a) Describe how nutrients are released, absorbed, utilized and excreted by the body
 - b) Classify dietary nutrients as to their function in producing energy, in growth or in the maintenance/repair of body tissue
- PO 2. Predict how excesses or deficiencies of nutrients impact on health and disease
 - a) Correlate the relationship between food consumption patterns and dietary-related health problems (e.g., diabetes, obesity, some cancers, osteoporosis, anemia, dental caries, cardiovascular disease)
 - b) Identify the proper food/nutrient adjustments required due to physical exertion, sports/fitness training, etc.
- PO 3. Identify the most common errors made which result in food borne infections (person to food, equipment to food, and food to food)
- PO 4. Identify those behaviors which are characteristically associated with anorexia and bulimia
 - a) Identify the psychosocial factors that lead to eating disorders
 - b) Identify the harmful effects of eating disorders
 - c) Critique the differences between a fad diet and a well-balanced diet
- PO 5. Describe the influence of advertising, peer pressure and food fads on proper diet, food selection and eating habits

- **1CH-P10. Explain the association of personal risk factors of chronic and communicable diseases, risk reduction and disease prevention components**

- PO 1. Define and provide examples of acute, chronic, communicable, noncommunicable, degenerative, metabolic, hereditary and congenital diseases
- PO 2. Describe how race, culture and hereditary factors impact disease susceptibility
 - a) List environmental influences that affect disease susceptibility
 - b) Describe the impact of fitness, diet, rest and other lifestyle issues related to disease
- PO 3. Evaluate disease prevention and control practices (e.g., immunization, pollution control and smoking cessation)
 - a) Identify methods of early recognition of health problems
 - b) Identify their responsibility as active participants in treatment and rehabilitation

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **1CH-D1. Form hypotheses regarding the influence of physical, mental, social and environmental health on the growth and development of members of select populations**

PO 1. Describe the effectiveness of current prevention programs related to members of select populations (e.g., tobacco-use cessation, abstinence-only curriculum)

- **1CH-D2. Describe the nutritional status and needs of the members of a population by examining the age, gender, physical activity, eating patterns, diet, pregnancy, substance use and disease associated with that population**

PO 1. Create a food plan for a specific population taking into consideration age, gender, physical activity, eating patterns, health condition (pregnancy, substance use, disease)

- **1CH-D3. Describe the impact of personal histories, health care choices and the aging process on the health and wellness of individuals**

PO 1. Critique the personal histories of individuals, from adolescence through late life, in relation to the health choices they made and the impact on their health status

- **1CH-D4. Explain conclusions drawn from current worldwide health issues**

PO 1. Form a hypothesis related to current worldwide issues which is grounded in a search on the topic (e.g., HIV, poverty, substance abuse)

- **1CH-D5. Identify the problems of malnutrition in relation to population distribution, economics, good consumption and politics**

PO 1. Design a program to address reduction in malnutrition among a target population, keeping in mind the population distribution, economics, food consumption and politics

- **1CH-D6. Explain ways in which American families accommodate and care for their elderly**

PO 1. Identify effective and ineffective ways that American families accommodate and care for their elderly

- **1CH-D7. Explain how public health policies, safety-related legislation, and government regulations influence health promotion and disease prevention**

PO 1. Describe agreements related to the relationship between publications, safety-related legislation and government regulations concerning their influence on health promotion and disease prevention

- **1CH-D8. Explain how the prevention and control of health problems are influenced by research and medical advances**

PO 1. Review NIH (National Institute of Health) CDC (Centers for Disease Control) or WHO (World Health Organization) research on a specific health issue and explain how the publication of the research changed public policy (e.g., HIV/AIDS, breast cancer, TB, hepatitis B)

STANDARD 2

Students demonstrate the ability to access accurate health information.

(Proficiency Grades 9-12)

- **2CH-P1. Explain the effectiveness of health information from home, school and community**

PO 1. Compile documents that are sources of health given in the home, at the school and from community health agencies

PO 2. Evaluate each document for its age appropriateness, content and its ability to influence health behavior

- **2CH-P2. Evaluate factors (e.g., peer pressure, media) that influence personal selection of health products and services)**

PO 1. Rank personal and social factors (e.g., peer pressure, family, media, culture, economics) that influence selection of health products and services for their level of influence

- **2CH-P3. Describe situations requiring professional health services and the cost and accessibility of health care services**

PO 1. Select a health situation requiring professional health services

PO 2. Compare the cost and accessibility of those services through multiple service providers (no private insurance, private insurance, indigent care and those that don't qualify for indigent care [KidCARE]) e.g., broken arm, pregnancy, leukemia, pneumonia, hernia, wound needing stitches

- **2CH-P4. Demonstrate how to access appropriate organizations (e.g., paramedics, law enforcement and physicians) useful in reducing threatening situations**

PO 1. Same as concept

- **2CH-P5. Identify the licensing and certification standards for health professions**

PO 1. Review local, state and federal regulations, and create a chart that reflects the licensing and certification standards for specific health professionals (e.g., physical therapist, nurse, nurse assistant, physician, dietitian, dentist, dental hygienist, X-ray technician, phlebotomist)

- **2CH-P6. Explain the role of local, state, federal and international agencies in providing health services and protecting and informing consumers**

PO 1. Describe local, state, federal and international agency involvement in providing health services and protecting and informing consumers (use a specific service or health issue)

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **2CH-D1. Describe the effectiveness, accessibility and inclusiveness of a health program in supporting individual and public health**

PO 1. Critique a public health program in relation to its accessibility, effectiveness, and inclusiveness for individuals as well as the public (e.g., STD's, campaigns to address risk behavior, violence intervention)

- **2CH-D2. Describe health promotion and disease prevention efforts in developing measures to reduce risks and protect against the spread of disease**

PO 1. Compare multi-state programs on their effectiveness in reducing and preventing the spread of disease (e.g., immunizations)

PO 2. Evaluate the contributing factors that account for the differences in effectiveness of public health programs

- **2CH-D3. Identify the changing trends in the health care delivery system and individual rights and responsibilities within the health care system**

PO 1. Track the health care delivery system over the past 20 years and the changing trends related to individual rights and responsibilities for a specific health issue (e.g., formation of managed care systems vs. private health insurance vs. indigent health care system)

STANDARD 3

Students demonstrate the ability to practice health-enhancing behaviors and reduce health risks.

(Proficiency Grades 9-12)

- **3CH-P1. Describe the role of individual responsibility for health-enhancement and wellness**

PO 1. Describe the role of individual responsibility for the individual's physical, social, spiritual and psychological growth and development (e.g., adequate nutrition, recreation and fitness, eating disorders, sexual involvement, and alcohol, tobacco and other drug use)

- **3CH-P2. Conduct a personal health assessment to determine strategies for health enhancement, risk reduction and stress management**

PO 1. Conduct a personal health assessment

PO 2. Establish personal goals related to personal health assessment (include strengths and weaknesses identified in the areas of health enhancement, risk-taking and stress)

- **3CH-P3. Explain the short-term and long-term consequences of responsible and risky/harmful behaviors (e.g., responsible: exercise, sleep, nutrition; risky: the use of tobacco, alcohol and other drugs)**

PO 1. Identify the decision-making process

PO 2. Identify the short-term and long-term consequences of responsible and risky/harmful behaviors

PO 3. Design a flow chart that distinguishes on a continuum most responsible vs. most risky/harmful behaviors (e.g., exercise, sleep, nutrition, use of tobacco, alcohol, and other drugs, sexual involvement)

- **3CH-P4. Develop injury prevention and management strategies to improve and maintain personal, family and community health**

PO 1. Describe responsible and safe behavior (personal, family and community) such as driving, sports, recreation, interpersonal relationships

PO 2. Construct self-protection techniques to use in various personal, family, social/community environments

- **3CH-P5. Perform advanced first aid procedures**

PO 1. Demonstrate basic first aid procedures for unconsciousness, shock, fractures, burns, cuts, choking, poisoning, etc.

PO 2. Demonstrate correct CPR procedures

- **3CH-P6. Explain how to survive in adverse environmental situations**

PO 1. Develop a plan for surviving in adverse environmental situations (e.g., extreme weather conditions)

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **3CH-D1. Conduct a personal health assessment to determine strategies for health-enhancement, risk reduction and stress management**

PO 1. Design a personal health assessment tool

PO 2. Develop strategies for personal health enhancement, risk reduction and stress management

- **3CH-D2. Describe consequences of responsible and risky/harmful behaviors throughout the life cycle**

PO 1. Identify the short-term and long-term consequences of responsible and risky/harmful behaviors during pregnancy, infancy, childhood, adolescence, adulthood and for the elderly

- **3CH-D3. Apply injury prevention and management strategies to improve and maintain personal, family and community health**

PO 1. Create a presentation to teach injury prevention and management strategies to improve or maintain either personal, family and/or community health

STANDARD 4

Students analyze the influence of culture, media, technology and other factors on health.

(Proficiency Grades 9-12)

- **4CH-P1. Explain how cultural diversity enriches and challenges health behaviors**

PO 1. Identify the benefits and challenges that different cultures provide in relation to health behaviors through development of a written project (e.g., table, graph, artistic interpretation)

- **4CH-P2. Describe the impact of media and technology on personal, family and community health**

PO 1. Produce a presentation that compares media and technology modalities (e.g., television, movies, advertisements, Internet, music, MTV) in terms of their influence on personal, family and community health

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **4CH-D1. Use primary and secondary source information and government regulations to assess the impact of the production, promotion and distribution of products and services on consumer health**

PO 1. Contact government agencies to obtain information

PO 2. Compile documents from health agencies to create an assessment of an agency's impact on production, promotion and distribution of products and services on consumer health (e.g., exercise equipment, fitness centers, safety features on automobiles)

STANDARD 5

Students demonstrate the ability to use interpersonal skills to enhance health.

(Proficiency Grades 9-12)

- **5CH-P1. Select ways to communicate care, consideration and respect of self and others to enhance health**

PO 1. Demonstrate the ability to:

- a) send clear and direct messages, verbally and nonverbally
- b) listen to others, receiving and understanding their communication
- c) ask for clarification when needed
- d) respond verbally and nonverbally

PO 2. Demonstrate effective techniques, including refusal skills, for handling conflict and solving problems

PO 3. Demonstrate effective techniques for resisting negative peer pressure, while maintaining positive interpersonal relationships

- **5CH-P2. Identify the causes of conflict among youth and adults in school and community, and demonstrate refusal, negotiation and collaboration skills to manage the conflict**

PO 1. Explain conflict and its root causes

PO 2. Explain effective conflict resolution techniques

PO 3. Participate in role plays that demonstrate refusal, negotiation, mediation and collaboration skills to resolve conflict

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **5CH-D1. Describe the social, economic and physical characteristics that influence family structures and interpersonal relations**

PO 1. Explain the factors that influence family structures and interpersonal relations

PO 2. Conduct a study of an actual (or fictitious from literature or media) family to assess the social, economic and physical characteristics that have influenced this family structure and its interpersonal relations

- **5CH-D2. Identify the causes of conflict in schools, families and communities; model strategies for solving interpersonal conflict through refusal, negotiation and collaboration skills to avoid potentially harmful situations**

PO 1. Construct a presentation that models effective refusal, negotiation, mediation and collaboration skills to resolve conflict

PO 2. Present role plays, demonstrations or other means of effective conflict resolution

STANDARD 6

Students demonstrate the ability to use goal setting and decision-making skills to enhance health.

(Proficiency Grades 9-12)

- **6CH-P1. Demonstrate the ability to utilize various strategies when making decisions related to health needs and risks of young adults**

PO 1. Demonstrate at least one effective strategy for reducing the probability of involvement in a risk behavior

- **6CH-P2. Describe health issues that require collaborative decision-making**

PO 1. Prepare a discussion analyzing health issues that require a collaborative decision (e.g., communicable disease, violence, environmental issues, sexual involvement)

- **6CH-P3. Explain immediate and long-term impact of health decisions on the individual**

PO 1. Demonstrate the impact (immediate and long-term) of health decisions on the individual (e.g., use of tobacco, alcohol and other drugs, sexual behavior, nutrition, exercise, sleep)

- **6CH-P4. Develop an effective plan for achieving and maintaining personal health goals for lifelong health-enhancement and wellness which recognizes the importance of goal setting and time management skills**

PO 1. Construct a health and wellness personal activities log for at least one week

PO 2. Construct a long-term plan for improving personal health and wellness that will include the goal setting procedures used and time management skills needed to accomplish this plan

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **6CH-D1. Describe immediate and long-term impact of health decisions on the individual, family and community**

PO 1. Interview an individual who has made healthy vs. unhealthy life choices and describe how their choices have impacted them individually, within their family and in the community (e.g., use tobacco or not, violence and incarceration or not, obesity or not, Type A vs. Type B personalities)

- **6CH-D2. Formulate an effective plan for lifelong health enhancement and wellness**

PO 1. Develop a strategic plan of personal lifelong health and wellness

STANDARD 7

Students demonstrate the ability to advocate for personal, family and community health.

(Proficiency Grades 9-12)

- **7CH-P1. Describe the effectiveness of communication methods for accurately expressing health information and ideas**

PO 1. Select a variety of communication modalities/methods (e.g., visual, verbal, written) for those most effective at presenting health information and ideas

- **7CH-P2. Research and present information about health issues**

PO 1. Present information about health issues (e.g., nutrition, eating disorders, exercise, athletic needs, the environment, disease control, human sexuality, substance abuse, mental health, stress management)

- **7CH-P3. Utilize strategies to overcome barriers when communicating information about health issues**

PO 1. Develop a presentation to a select group involved in unhealthy behavior that would encourage the choice of health-enhancing behavior (e.g., cessation information to smokers, conflict resolution)

- **7CH-P4. Demonstrate the ability to influence and support others in making positive health choices**

PO 1. Participate in a peer mediation, peer education, peer leadership, or peer counseling program, or create one on your campus

PO 2. Participate in a school or community services learning activity

- **7CH-P5. Demonstrate the ability to work cooperatively when advocating for healthy communities**

PO 1. Participate as a volunteer for a school/community health promotion program

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **7CH-D1. Demonstrate the ability to adapt health messages and communication techniques to the characteristics of a particular audience**

PO 1. Create age-appropriate presentations that promote healthy behavior (e.g., tobacco use prevention presentations to sixth grade classes; dating violence prevention to ninth graders; diabetes management for senior citizens)

PHYSICAL ACTIVITY STANDARDS

STANDARD 1

Students demonstrate proficiency and the achievement of higher order cognitive skills necessary to enhance motor skills.

(Proficiency Grades 9-12)

- **1PA-P1. Demonstrate competency in at least three different types of movement forms (e.g., aquatics, team sports, individual and dual sports, outdoor pursuits, self-defense, gymnastics, dance)**

PO 1. Demonstrate competency (basic skills, strategies and rules) in an increasing number of more complex versions of at least three different movement forms

- **1PA-P2. Use specialized knowledge to develop movement competence/proficiency**

PO 1. Demonstrate improved skills by applying the critical elements to competent performance

- **1PA-P3. Identify and apply critical elements to enable the development of movement competence/proficiency**

PO 1. Identify the critical elements of a skill

PO 2. Demonstrate and apply the biomechanical concepts and principles to the skills

- **1PA-P4. Identify and apply characteristics of highly skilled performance to enable the development of movement competence/proficiency**

PO 1. Identify strengths and weaknesses of highly skilled performances

PO 2. Identify skills needed to improve performance

- **1PA-P5. Apply discipline-specific information to individual performance**

PO 1. Same as concept

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **1PA-D1. Demonstrate proficiency in at least three movement forms (e.g., aquatics, team sports, individual and dual sports, outdoor pursuits, self-defense, gymnastics, dance)**

PO 1. Demonstrate proficiency (basic skills, strategies and rules) in at least three different movement forms

- **1PA-D2. Explain pertinent scientifically-based information regarding movement performance**

PO 1. Demonstrate improved skills by applying the critical elements to proficient performance

PO 2. Research highly skilled performers or performances and critique the research

- **1PA-D3. Apply advanced movement-specific information in the development of movement proficiency**

PO 1. Use coaching information (self, peer, teacher, video) to improve performance

- **1PA-D4. Use discipline-specific knowledge to enable the independent learning of movement skills**

PO 1. Design a plan for self-improvement of a specific movement skill

STANDARD 2

Students comprehend basic physical activity principles and concepts that enable them to make decisions, solve problems and to become self-directed lifelong learners who are informed physical activity consumers.

(Proficiency Grades 9-12)

- **2PA-P1. Explain the difference between facts and myths (e.g., the validity of marketing claims promoting fitness products and services) related to physical activity**

PO 1. Identify various products and their marketing claims

PO 2. Explain value of consumer items

- **2PA-P2. Identify consumer issues related to selection, purchase, care and maintenance of personal fitness equipment**

PO 1. Identify personal needs

PO 2. Identify similarities and differences among products

PO 3. Identify use

PO 4. Explain cost quality

- **2PA-P3. Identify appropriate individual requirements for physical activity prescription concerning the mode, intensity, duration, frequency and progression**

PO 1. Explain principles of training

PO 2. Apply principles of training

- **2PA-P4. Demonstrate ability to self-assess each area of health-related physical fitness and interpret test scores**

PO 1. Match fitness components and tests

PO 2. Administer self-tests

PO 3. Explain results

PO 4. Prescribe needs and identify strengths

- **2PA-P5. Identify different sports and activities and their contributions to specific health-related physical fitness components**

PO 1. Explain the value of various sports/activities on fitness components

- **2PA-P6. Demonstrate a knowledge of physiological changes that result from physical activity participation**

PO 1. Identify positive physical changes that affect the heart, circulatory, respiratory and other systems as a result of active participation in sports

- **2PA-P7. Identify safety principles associated with physical fitness development**

PO 1. Same as concept

- **2PA-P8. Design a personal fitness program that 1) will lead to, or maintain, an acceptable level of health-related fitness and 2) is based on an understanding of training principles, individual skill levels and availability of resources**

PO 1. Write program goals

PO 2. Design a program

PO 3. Follow the program

PO 4. Monitor and adjust

- PO 5. Complete the program
- PO 6. Design a personal fitness program
- PO 7. Participate regularly in a personal fitness program
- PO 8. Complete a personal fitness program

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **2PA-D1. Explain how each part of health-related physical fitness contributes to lifelong health and wellness**

PO 1. Same as concept

- **2PA-D2. Design a personal fitness program that will 1) lead to, or maintain, an acceptable level of health-related fitness and 2) is based on an understanding of training principles, individual skill levels and availability of resources**

PO 1. Write program goals

PO 2. Design a program

PO 3. Follow the program

PO 4. Monitor and adjust

PO 5. Complete the program

PO 6. Design a personal fitness program

PO 7. Participate regularly in a personal fitness program

PO 8. Complete a personal fitness program

- **2PA-D3. Identify sound nutritional practices and stress management skills associated with physical activity and fitness**

PO 1. Same as concept

STANDARD 3

Students exhibit a physically active lifestyle.

(Proficiency Grades 9-12)

- **3PA-P1. Participate regularly in health-enhancing and personally rewarding physical activity**

PO 1. Complete a program in cardiorespiratory fitness

PO 2. Complete a developmental program in muscular strength and muscular endurance

PO 3. Complete a flexibility program

- **3PA-P2. Select physical activities from a variety of movement forms based on personal interest, meaning and fulfillment**

PO 1. Complete a program in cardiorespiratory fitness

PO 2. Complete a developmental program in muscular strength and muscular endurance

PO 3. Complete a flexibility program

- **3PA-P3. Develop a personal physical activity program meeting individual needs**

PO 1. Design a program

PO 2. Follow the program

PO 3. Monitor and adjust the program

(Distinction – Honors)

- **3PA-D1. Participate regularly in health-enhancing and personally challenging physical activity**

PO 1. Complete a semester or season in a chosen extracurricular sport or activity

- **3PA-D2. Participate in aquatics, self-defense, gymnastics, games, sports, dance, outdoor pursuits and other physical activities that contribute to the attainment of personal goals and the maintenance of wellness**

Same as concept

- **3PA-D3. Explain how activity participation patterns will change throughout life and have some strategies to deal with those changes**

PO 1. Develop a plan for lifelong activity

STANDARD 4

Students achieve and maintain a health-enhancing level of physical fitness.

(Proficiency Grades 9-12)

- **4PA-P1. Accomplish the health-related physical fitness standards as designed by Fitnessgram**

PO 1. Identify a personal level of fitness on:

- (a) cardiorespiratory performance
- (b) muscular strength
- (c) muscular endurance
- (d) flexibility
- (e) body composition

- **4PA-P2. Use principles of training for the purpose of modifying levels of health fitness**

PO 1. Identify the results of the Fitnessgram

PO 2. Apply the information to develop personal fitness goals/plans

- **4PA-P3. Design a personal health-related fitness program based on an accurately assessed fitness profile**

PO 1. Design and participate in a personal fitness program incorporating the FITT principle

- **4PA-P4. Identify safe and risky exercises and demonstrate safe exercise alternatives**

PO 1. Describe unsafe practices and the appropriate safe alternative

PO 2. Devise a plan to reduce risk and possible injury

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **4PA-D1. Accomplish the health-related fitness standards as designed by Fitnessgram**

PO 1. Explain the results of the Fitnessgram

PO 2. Apply the information to develop personal fitness goals/plans

PO 3. Monitor Fitnessgram results and adjust the personal fitness plan as necessary for continuous improvement

- **4PA-D2. Demonstrate the skill, knowledge and desire to monitor and adjust levels of fitness to meet personal goals**

PO 1. Same as concept

- **4PA-D3. Design a personal health-related fitness program based on an accurately assessed fitness profile**

PO 1. Design a personal fitness program

PO 2. Participate regularly in a personal fitness program

PO 3. Complete a personal fitness program and re-evaluate using the Fitnessgram

STANDARD 5

Students develop self-initiated behaviors that promote effective personal and social interactions in physical activity settings.

(Proficiency Grades 9-12)

- **5PA-P1. Apply safe practices, rules, procedures and etiquette in all physical activity settings**

PO 1. Follow safety rules

PO 2. Behave appropriately

PO 3. Show respect and consideration for oneself and others

- **5PA-P2. Act independently of peer pressure**

PO 1. Same as concept

- **5PA-P3. Resolve conflict in appropriate ways**

PO 1. Identify and discuss conflict in physical education and sports

PO 2. Construct a conflict resolution plan

PO 3. Demonstrate conflict resolution skills

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **5PA-D1. Initiate independent and responsible personal behavior in physical activity settings**

PO 1. Demonstrate exemplary standards of behavior

- **5PA-D2. Take a leadership role and follow through, as appropriate, in order to accomplish group goals**

PO 1. Demonstrate leadership skills

PO 2. Apply leadership skills

- **5PA-D3. Explain a safe environment for self and others in physical activity settings**

PO 1. Identify and recognize unsafe conditions and behaviors

- **5PA-D4. Identify potentially dangerous outcomes and consequences of participation in physical activities**

PO 1. Discuss the level of risk in various sports and activities

STANDARD 6

Students demonstrate understanding and respect for differences among people in physical activity settings.

(Proficiency Grades 9-12)

- **6PA-P1. Explain the value of sport and physical activity in understanding multiculturalism**

PO 1. Identify sports and activities that appeal to people of different genders, race, ethnic and religious backgrounds

- **6PA-P2. Invite others with differences to join in personally enjoyable physical activity**

PO 1. Team up with people of diverse backgrounds

PO 2. Complete an activity with a diverse team

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **6PA-D1. Explain the role of physical activity in a diverse society**

PO 1. Explain how sports and physical activities can remove boundaries and improve understanding between people

- **6PA-D2. Develop strategies for including persons from diverse backgrounds and abilities in physical activities**

PO 1. Design a sports or fitness activity for a specific individual or group from a different ethnic, racial or ability background

PO 2. Instruct a sport or activity to a diverse group or person

STANDARD 7

Students develop behavioral skills (self-management skills) essential to maintaining a physically active lifestyle.

(Proficiency Grades 9-12)

- **7PA-P1. Demonstrate knowledge of goal setting and the ability to apply this knowledge to personal physical fitness and activity goals**

PO 1. List goal setting steps

PO 2. Apply goal setting strategies to a personal fitness plan

- **7PA-P2. Identify attitudes associated with regular participation in physical activity and/or fitness development activities**

PO 1. List the rewards of regular participation

PO 2. Identify obstacles to regular participation

PO 3. Explain the importance of motivation, prioritizing, dedication and self-discipline in fitness development

- **7PA-P3. Organize time management skills associated with regular physical activity participation**

PO 1. Complete and document regular physical activity outside of class at least 3 times per week

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **7PA-D1. Describe common barriers to regular activity participation and methods of overcoming these barriers**

PO 1. Create a diary recording one's own workouts and their feelings about them

PO 2. Evaluate the diary

- **7PA-D2. Explain how an understanding of self-efficacy and self-esteem is related to physical activity and the ability to use self-management skills necessary for developing both**

PO 1. Describe the mental benefits of participation in lifelong fitness and sports

PO 2. Describe one's own feelings having accomplished personal fitness goals or failed to reach such goals

PO 3. Organize a fitness program into a busy lifestyle (time management)

PO 4. Create rewards for achieving personal goals

Foreign and Native Language Standards 1997

Proficiency (Grades 9-12)

Foreign and Native Language* Standards Rationale

Today's students prepare for the tomorrow in which they will need to function in varied contexts. The constant shrinking of the globe will expand their experience beyond that of previous generations to include contacts with other languages and cultures, both in their private lives and in their work. Languages are increasingly demanded in a wide range of professions. To succeed, students will need new tools, many of which are available primarily, if not solely, through the study of other languages. They include:

- ***the ability to communicate well for varied purposes.*** In other languages, as well as in English, effective communication requires an understanding of both the target language and culture under study and one's own, which implies the ability to interact confidently within many arenas, including the workplace and communities where the language is spoken.
- ***a solid foundation in basic subject matter and skills.*** All core subjects must contribute to this end, in an integrated fashion, to aid students in realizing the connections among the parts of their education. Basic subject matter includes the development of verbal reasoning, and listening skills and knowledge of the great achievements of human cultures, e.g., artistic, literary, scientific. The study of another language has been shown to enhance student performance in other academic fields. Learnings from other fields can also be reinforced in the foreign language classroom.
- ***an understanding and appreciation of the diversity of languages and cultures, including one's own.*** These tools aid students to function as responsible, informed, and confident citizens and enhance their personal development. They allow the finding of one's own place in the wider world.

Introduction to the Foreign Language Standards

The foreign language standards state what students need to know about languages and cultures, including their own; what students need to be able to do; and how this knowledge and these abilities relate to the subject matter of other core areas. The standards are stated clearly and in measurable terms:

- what students need to **know** in order to function successfully as they enter a new millennium that promises major changes in communications and contacts with other languages and cultures;
- what students need to be able to **do**. Knowing about a language and its culture(s), while essential, is not sufficient; students will develop skills for functioning effectively in varied contexts; and

*The Foreign Language Standards name was changed 10/22/01 to Foreign and Native Language by the state Board of Education.

- the integration of foreign languages into the rest of the curriculum so that the connections are clear and so that learning in all areas is facilitated, including the development of a deeper understanding of one's own language and culture. The five strands under which the standards are organized—Communication, Culture, Connections, Comparisons and Communities—are meant to be interwoven among themselves as well, rather than taught as separate entities. Meeting the standards for each one will contribute to reaching the standards of the others.

These standards for foreign language study are highly challenging for all students. They assume an extended sequence of learning throughout the students' school career, thus reflecting the likely nature of schools in the future. Meeting these standards will require the study of grammar—the forms and structures of the language—as well as effective learning strategies. Students will also need to use technologies that will bring the language and the culture to them in new ways and enhance their opportunities to learn.

In these standards we refer to “the target language,” which may stand for “world language,” “foreign language,” “second language,” or “heritage language” (i.e., the language that is the predominant language in the home).

Descriptions of Language Abilities for Each Level

Readiness

Students use basic vocabulary related to people, places, things and actions close to their own lives. They express themselves in phrases, short sentences and memorized material. Their language is characterized by an emerging control of the most common basic grammatical forms and structures. Because comprehension of oral and written language normally exceeds production, students are able to comprehend simple descriptions, narratives, and authentic materials such as advertisements, on topics studied in class. Pronunciation and fluency are such that students often might not be understood by native speakers. They are able to write accurately what they can say.

Foundations

Students speak and write extemporaneously using short sentences and sentence strings in present tense on topics within their experience with the language. They can describe, ask and answer questions; engage in simple conversations; and carry out simple realistic functions such as ordering a meal, buying something, or introducing themselves or others to a group. Since their knowledge of the forms and structures of the language has grown rapidly but their practice has been limited, their speech is likely to contain numerous linguistic errors. Students are comprehensible to sympathetic listeners who have experience with non-native speakers of their language. Their written language still mirrors their oral language, although they may be able to express more ideas more accurately in writing, given time to reflect, review and revise.

Essentials

Students speak with somewhat longer utterances and begin to display an ability to connect phrases and sentences to show relations between ideas expressed. Although patterns of errors are still common, students now speak and write extemporaneously in past, present and future time, using vocabulary related to their own lives and interests. Accent and intonation are generally accurate, although pauses and false starts may be common, as students give simple instructions and directions, make comparisons, solve problems together, and engage in conversations on a range of topics including leisure activities, professions and current events. In written work, students' spelling and punctuation are mostly accurate; and they organize their ideas well.

Proficiency

Students use paragraph-length connected discourse to narrate, describe, and discuss ideas and opinions. On topics of interest to them and within their experience, they show few patterns of linguistic errors, they are generally comprehensible to native speakers of the language, and their vocabulary is sufficient to avoid awkward pauses. They are able to circumvent linguistic gaps or lapses by "finding another way to say it." Given time to reflect and revise, they are able to express their ideas completely and interestingly in writing, with generally accurate grammar, vocabulary, spelling, accents and punctuation. They comprehend most authentic expository and fictional material produced for contemporary native speakers.

Distinction

Students show almost no patterns of linguistic errors and are able to carry out almost any task that they can execute in English, albeit with less fluency and control or breadth of vocabulary and grammar. They can argue a point effectively and extemporaneously, explaining their point of view in detail. In writing, their ideas are well organized and clearly, completely, and interestingly presented, with accurate use of the language's writing system. They can comprehend any non-technical material produced for the general public of native speakers in the standard language.

Table 1. Foreign and Native Language Standards

STANDARD 1: Communication

Students understand and interpret written and spoken communication on a variety of topics in the target language

STANDARD 2: Communication

Students engage in oral and written exchanges which include providing and obtaining information, expressing feelings and preferences, and exchanging ideas and opinions in the target language.

STANDARD 3: Communication

Students present information and ideas in the target language on a variety of topics to listeners and readers.

STANDARD 4: Culture

Students know “what to do when” and “what to say while doing it” in the culture and use this knowledge to interact appropriately. They also understand the relationships between cultural perspectives, products and practices within cultures.

STANDARD 5: Connections

Students use the target language and authentic sources to reinforce and/or learn other content from the other subject areas.

STANDARD 6: Comparisons

Students develop insights into their own language and their own culture through the study of the target language.

STANDARD 7: Communities

Students use the target language within and beyond the school setting.

FOREIGN AND NATIVE LANGUAGE STANDARDS

STANDARD 1: COMMUNICATION

Students understand and interpret written and spoken communication on a variety of topics in the target language.

PROFICIENCY (Grades 9-12)

- **1FL-P1. Comprehend the main ideas and significant details in both oral presentations and written text**
- **1FL-P2. Comprehend authentic newspapers and magazine articles**
- **1FL-P3. Identify characteristics of a variety of literary genres including poetry**
- **1FL-P4. Identify and comprehend cultural nuances, including humor, in written and spoken language**
- **1FL-P5. Analyze and determine the significance of the principal themes and characteristics of a major literary text**
- **1FL-P6. Analyze the styles of two or more authors within one genre**

DISTINCTION (Honors)

Note: This level description applies to each of the three standards for the Communication Strand

- **1FL-D1. Discuss ideas, events or texts successfully with native speakers in conversation or as a presentation to a group**
- **1FL-D2. Debate, argue and negotiate on a variety of issues**
- **1FL-D3. Write analyses of literary works, noting stylistic conventions and cultural nuances**
- **1FL-D4. Conduct a comparative analysis of two or more authentic written or recorded works in the target language**

STANDARD 2: COMMUNICATION

Students engage in oral and written exchanges which include providing and obtaining information, expressing feelings and preferences, and exchanging ideas and opinions in the target language.

PROFICIENCY (Grades 9-12)

- **2FL-P1. Express and support opinions on a variety of topics, concepts and ideas**
- **2FL-P2. Use complex sentences with connective expressions and idioms in oral and written communication**
- **2FL-P3. Compare and contrast ideas, people, places and things**
- **2FL-P4. Narrate anecdotes and original stories**

DISTINCTION (Honors)

(See Standard 1 [Communication])

STANDARD 3: COMMUNICATION

Students present information and ideas in the target language on a variety of topics to listeners and readers.

PROFICIENCY (Grades 9-12)

- **3FL-P1. Present persuasive arguments effectively on a range of topics**
- **3FL-P2. Present a research project orally or publish it in writing or in a video**
- **3FL-P3. Present a humorous story, anecdote or joke**

DISTINCTION (Honors)

(See Standard 1 [Communication])

STANDARD 4: CULTURE

Students know “what to do when” and “what to say while doing it” in the culture and use this knowledge to interact appropriately. They also understand the relationships between cultural perspectives, products and practices within cultures.

PROFICIENCY (Grades 9-12)

- **4FL-P1. Explain how the target language and its culture add to the richness of our cultural diversity**
- **4FL-P2. Use formal and informal language appropriately in a variety of settings**
- **4FL-P3. Identify, analyze and discuss various patterns of behavior or interactions typical of the culture studied**
- **4FL-P4. Investigate and explain the function of products of the culture (e.g., institutions, crafts, laws, music) and their relationship to cultural perspectives**
- **4FL-P5. Identify the target language’s literary masterpieces and their authors**

DISTINCTION (Honors)

- **4FL-D1. Identify, discuss and analyze products of the culture (e.g., social, economic and political institutions) and the relationships between these institutions and the perspectives of the culture**
- **4FL-D2. Experience, discuss and analyze expressive products of the culture including selections from various literary genres and the visual arts**
- **4FL-D3. Recognize the similarities and differences in literary style among well-known authors within the target language from one or more historical periods**

STANDARD 5: CONNECTIONS

Students use the target language and authentic sources to reinforce and/or learn other content from the other subject areas.

PROFICIENCY (Grades 9-12)

- **5FL-P1. Discuss topics from other school subjects or the workplace in the target language including political and historical concepts, world-wide health issues and environmental concerns**
- **5FL-P2. Acquire information from a variety of sources written in the target language about a topic being studied in other subjects**
- **5FL-P3. Use a variety of authentic sources in the target language to prepare reports for other content subject areas**

DISTINCTION (Honors)

- **5FL-D1. Study successfully one or more content areas in the target language**

STANDARD 6: COMPARISONS

Students develop insights into their own language and their own culture through the study of the target language.

PROFICIENCY (Grades 9-12)

- **6FL-P1. Compare and contrast various elements of the target language, such as tie or tense, with parallel linguistic elements in English**
- **6FL-P2. Use idiomatic expressions in appropriate contexts**
- **6FL-P3. Compare and contrast the treatment of current issues in both the target culture and the student's culture by drawing on authentic texts**

DISTINCTION (Honors)

- **6FL-D1. Provide an in-depth analysis of another culture's perception of the United States within the world arena**
- **6FL-D2. Compare and contrast the use of English and the target language and culture to carry out specific communicative purposes (e.g., motivating others, telling a story, conducting business)**

STANDARD 7: COMMUNITIES

Students use the target language within and beyond the school setting.

PROFICIENCY (Grades 9-12)

- **7FL-P1. Research topics of personal, global or community interest, using resources produced for native speakers**
- **7FL-P2. Interview speakers of the target language on historical or current topics of cultural or professional interest**
- **7FL-P3. Serve as a guide or informal interpreter for visitors from other countries**
- **7FL-P4. Perform a short play in the target language for parents, visitors or a community group**

DISTINCTION (Honors)

- **7FL-D1. Translate written materials for a local business, bank, school, etc.**
- **7FL-D2. Publish an original article or story**
- **7FL-D3. Serve as interpreter to assist native speakers who require help, such as the elderly or disabled**
- **7FL-D4. Tutor students from other countries who need help with school subjects in their native language while they are learning English**
- **7FL-D5. Co-host a cultural festival in conjunction with the community**

Reading Standard Articulated by Grade Level 2003

High School

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 9

Strand 1: Reading Process

Reading Process consists of the five critical components of reading, which are Phonemic Awareness, Phonics, Fluency, Vocabulary and Comprehension of connected text. These elements support each other and are woven together to build a solid foundation of linguistic understanding for the reader.

Concept 1: Print Concepts

Demonstrate understanding of print concepts.

(Grades K-3)

Concept 2: Phonemic Awareness

Identify and manipulate the sounds of speech.

(Grades K-2)

Concept 3: Phonics

Decode words, using knowledge of phonics, syllabication, and word parts.

(Grades K-3)

Concept 4: Vocabulary

Acquire and use new vocabulary in relevant contexts.

PO 1. Determine the meaning of vocabulary, using linguistic roots and affixes (e.g., Latin, Greek, Anglo-Saxon).

PO 2. Infer word meanings from context (e.g., definition, example, restatement, comparison/contrast, cause/effect).

PO 3. Distinguish between the denotative and connotative meanings of words.

PO 4. Identify the meaning of metaphors based on common literary allusions.

PO 5. Identify the meanings, pronunciations, syllabication, synonyms, antonyms, parts of speech, and correct spellings by using resources such as general and specialized dictionaries, thesauri, glossaries, and CD-ROM and the Internet when available.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 9

Concept 5: Fluency

Read fluently.

PO 1. Read from a variety of genres with accuracy, automaticity (immediate recognition), and prosody (expression).

Concept 6: Comprehension Strategies

Employ strategies to comprehend text.

PO 1. Predict text content using prior knowledge and text features (e.g., illustrations, titles, topic sentences, key words).

PO 2. Generate clarifying questions in order to comprehend text.

PO 3. Use graphic organizers in order to clarify the meaning of the text.

PO 4. Connect information and events in text to experience and to related text and sources.

PO 5. Apply knowledge of organizational structures (e.g., chronological order, sequence-time order, cause and effect relationships, logical order, by classification, problem-solution) of text to aid comprehension.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 9

Strand 2: Comprehending Literary Text

Comprehending Literary Text identifies the comprehension strategies that are specific in the study of a variety of literature.

Concept 1: Elements of Literature

Identify, analyze, and apply knowledge of the structures and elements of literature.

PO 1. Describe the author's use of literary elements:

- theme (moral, lesson, meaning, message, view or comment on life),
- point of view (e.g., first vs. third, limited vs. omniscient),
- characterization (qualities, motives, actions, thoughts, dialogue, development, interactions),
- setting (time of day or year, historical period, place, situation), and
- plot (exposition, conflict, rising action, climax, falling action, and resolution).

PO 2. Explain different elements of figurative language, including simile, metaphor, personification, hyperbole, symbolism, allusion, and imagery in a literary selection.

PO 3. Compare (and contrast) works within a literary genre that deal with similar themes (e.g., compare-short stories, novels, short stories, poems).

PO 4. Compare interactions among major characters and minor characters in literary text with emphasis upon how the plot is revealed through action of the dialog.

Concept 2: Historical and Cultural Aspects of Literature

Recognize and apply knowledge of the historical and cultural aspects of American, British, and world literature.

PO 1. *Describe the historical and cultural aspects found in cross-cultural works of literature.*

PO 2. Compare (and contrast) classic works of literature that deal with similar topics and problems (e.g., individual and society, meaning of friendship, freedom, responsibility).

PO 3. Recognize ways that forms of literature (including poetry, novel and/or short story) present similar themes differently across genres.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 9

Strand 3: Comprehending Informational Text

Comprehending Informational Text delineates specific and unique skills that are required to understand the wide array of informational text that is a part of our day-to-day experiences.

Concept 1: Expository Text

Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.

PO 1. Compare (and contrast) original text to a summary for accuracy of the main ideas, inclusion of critical details, and the extent to which it conveys the underlying meaning of the original text.

PO 2. Distinguish facts from opinions in expository selections such as editorials, newspaper articles, essays, reviews, and critiques, providing supporting evidence from the text.

PO 3. *Locate specific information by using organizational features (e.g., table of contents, headings, captions, bold print, italics, glossaries, indices, key/guide words, topic sentences, concluding sentences, end notes, footnotes, bibliographic references) in expository text. (Connected to Research Strand in Writing)*

PO 4. Organize information from both primary and secondary sources by taking notes, outlining ideas, paraphrasing information; and by making charts, conceptual maps, learning logs, and/or timelines. (Connected to Research Strand in Writing)

PO 5. Interpret graphic sources of information (e.g., charts, maps, diagrams, illustrations, tables, timelines, graphs) to support ideas. (Connected to Research Strand in Writing)

PO 6. Use knowledge of modes of expository writing (e.g., chronological order, comparison and contrast, cause and effect relationships, logical order, classification schemes, sequence-time order, problem-solution, analogy, definition, narrative) to interpret text.

PO 7. Explain how one excerpt relates and contributes to the reading selection (e.g., sentence to paragraph, paragraph to selection).

PO 8. Support conclusions drawn from ideas and concepts in expository text.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 9

Concept 2: Functional Text

Identify, analyze, and apply knowledge of the purpose, structures, clarity, and relevancy of functional text.

PO 1. Synthesize information from multiple sources (e.g., texts, maps, illustrations, workplace documents, schematic diagrams) to solve a problem.

PO 2. Synthesize information from multiple sources (e.g., texts, maps, illustrations, workplace documents, schematic diagrams) to draw conclusions.

PO 3. Identify the objective(s) of functional text (e.g., warranties, product information, technical manuals, consumer publications, workplace documents).

Concept 3: Persuasive Text

Explain basic elements of argument in text and their relationship to the author's purpose and use of persuasive strategies.

PO 1. Identify the central argument and its elements (e.g., argument by cause and effect, analogy, authority, emotion, logic) in persuasive text.

PO 2. Evaluate the appropriateness of an author's word choice for an intended audience.

PO 3. Identify unsupported inferences or fallacious reasoning (e.g., circular reasoning, false causality, over-generalization, over-simplification, self-contradiction) in the arguments advanced in persuasive text.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 10

Strand 1: Reading Process

Reading Process consists of the five critical components of reading, which are Phonemic Awareness, Phonics, Fluency, Vocabulary and Comprehension of connected text. These elements support each other and are woven together to build a solid foundation of linguistic understanding for the reader.

Concept 1: Print Concepts

Demonstrate understanding of print concepts.

(Grades K-3)

Concept 2: Phonemic Awareness

Identify and manipulate the sounds of speech.

(Grades K-2)

Concept 3: Phonics

Decode words, using knowledge of phonics, syllabication, and word parts.

(Grades K-3)

Concept 4: Vocabulary

Acquire and use new vocabulary in relevant contexts.

PO 1. Determine the meaning of vocabulary, using linguistic roots and affixes (e.g., Latin, Greek, Anglo-Saxon).

PO 2. Infer word meanings from context (e.g., definition, example, restatement, comparison/contrast, cause/effect).

PO 3. Determine how the meaning of the text is affected by the writer's word choice (e.g., literal vs. figurative language, idioms, adages).

PO 4. Identify the meaning of metaphors based on common literary allusions.

PO 5. Determine the meanings, pronunciations, contextually appropriate synonyms and antonyms, replacement words and phrases, etymologies, and correct spellings of words by using resources such as general and specialized dictionaries, thesauri, glossaries, and CD-ROM and the Internet when available.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 10

Concept 5: Fluency

Read fluently.

PO 1. Read from a variety of genres with accuracy, automaticity (immediate recognition), and prosody (expression).

Concept 6: Comprehension Strategies

Employ strategies to comprehend text.

PO 1. Predict text content using prior knowledge and text features (e.g., illustrations, titles, topic sentences, key words).

PO 2. Generate clarifying questions in order to comprehend text.

PO 3. Use graphic organizers in order to clarify the meaning of the text.

PO 4. Connect information and events in text to experience and to related text and sources.

PO 5. Apply knowledge of organizational structures (e.g., chronological order, sequence-time order, cause and effect relationships, logical order, by classification, problem-solution) of text to aid comprehension.

Strand 2: Comprehending Literary Text

Comprehending Literary Text identifies the comprehension strategies that are specific in the study of a variety of literature.

Concept 1: Elements of Literature

Identify, analyze, and apply knowledge of the structures and elements of literature.

PO 1. Analyze the author's use of literary elements:

- theme (moral, lesson, meaning, message, view or comment on life),
- point of view (e.g., first vs. third, limited vs. omniscient),
- characterization (qualities, motives, actions, thoughts, dialogue, development, interactions),
- setting (time of day or year, historical period, place, situation), and
- plot (exposition, major and minor conflicts, rising action, climax, falling action, and resolution).

PO 2. Analyze the author's use of figurative language, including simile, metaphor, personification, hyperbole, symbolism, allusion, and imagery in a literary selection.

PO 3. Compare (and contrast) the illustration of the same theme in two different literary genres, using their structural features as the basis for the comparison (e.g., novel and play, poem, short story).

PO 4. Identify how an author's choice of words and imagery sets the tone and advances the work's theme.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 10

Concept 2: Historical and Cultural Aspects of Literature

Recognize and apply knowledge of the historical and cultural aspects of American, British, and world literature.

PO 1. Describe the historical and cultural aspects found in cross-cultural works of literature.

PO 2. Compare (and contrast) classic works of literature that deal with similar topics and problems (e.g., individual and society, meaning of friendship, freedom, responsibility).

PO 3. Recognize ways that forms of literature (including poetry, novel and/or short story) present similar themes differently across genres.

Strand 3: Comprehending Informational Text

Comprehending Informational Text delineates specific and unique skills that are required to understand the wide array of informational text that is a part of our day-to-day experiences.

Concept 1: Expository Text

Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.

PO 1. Compare (and contrast) original text to a summary for accuracy of the main ideas, inclusion of critical details, and the extent to which it conveys the underlying meaning of the original text.

PO 2. Distinguish supported inferences from unsupported inferences in expository selections such as editorials, newspaper articles, essays, reviews, and critiques.

PO 3. Locate specific information by using organizational features (e.g., table of contents, headings, captions, bold print, italics, glossaries, indices, key/guide words, topic sentences, concluding sentences, end notes, footnotes, bibliographic references) in expository text. (Connected to Research Strand in Writing)

PO 4. Organize information from both primary and secondary sources by taking notes, outlining ideas, paraphrasing information; and by making charts, conceptual maps, learning logs and/or timelines for a research document or other assigned tasks. (Connected to Research Strand in Writing)

PO 5. Interpret graphic sources of information (e.g., charts, maps, diagrams, illustrations, tables, timelines, graphs) to support ideas. (Connected to Research Strand in Writing)

PO 6. Use knowledge of modes of expository writing (e.g., chronological order, comparison and contrast, cause and effect relationships, logical order, classification schemes, sequence-time order, problem-solution, analogy, definition, narrative) to interpret text.

PO 7. Make relevant inferences by synthesizing concepts and ideas from a single reading selection.

PO 8. Support conclusions drawn from ideas and concepts in expository text.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 10

Concept 2: Functional Text

Identify, analyze, and apply knowledge of the purpose, structures, clarity, and relevancy of functional text.

PO 1. Synthesize information from multiple sources (e.g., texts, maps, illustrations, workplace documents, schematic diagrams) to solve a problem.

PO 2. Synthesize information from multiple sources (e.g., texts, maps, illustrations, workplace documents, schematic diagrams) to draw conclusions.

PO 3. Analyze the effectiveness of functional text (e.g., warranties, product information, technical manuals, consumer publications, workplace documents) to achieve its stated purpose(s).

Concept 3: Persuasive Text

Explain basic elements of argument in text and their relationship to the author's purpose and use of persuasive strategies.

PO 1. Describe the central argument and its elements (e.g., argument by cause and effect, analogy, authority, emotion, logic) in persuasive text.

PO 2. Describe how persuasive techniques (e.g., repetition, sentence variety, understatement, overstatement) contribute to the power of persuasive text.

PO 3. Identify unsupported inferences or fallacious reasoning (e.g., circular reasoning, false causality, over-generalization, over-simplification, self-contradiction) in the arguments advanced in persuasive text.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 11

Strand 1: Reading Process

Reading Process consists of the five critical components of reading, which are Phonemic Awareness, Phonics, Fluency, Vocabulary and Comprehension of connected text. These elements support each other and are woven together to build a solid foundation of linguistic understanding for the reader.

Concept 1: Print Concepts

Demonstrate understanding of print concepts.

(Grades K-3)

Concept 2: Phonemic Awareness

Identify and manipulate the sounds of speech.

(Grades K-2)

Concept 3: Phonics

Decode words, using knowledge of phonics, syllabication, and word parts.

(Grades K-3)

Concept 4: Vocabulary

Acquire and use new vocabulary in relevant contexts.

PO 1. Draw inferences about meaning of new vocabulary, based on knowledge of linguistic roots and affixes (e.g., Latin, Greek, Anglo-Saxon).

PO 2. Identify the meaning of metaphors based on literary allusions and conceits.

Concept 5: Fluency

Read fluently.

PO 1. Read from a variety of genres with accuracy, automaticity (immediate recognition), and prosody (expression).

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 11

Concept 6: Comprehension Strategies

Employ strategies to comprehend text.

PO 1. Predict text content using prior knowledge and text features (e.g., illustrations, titles, topic sentences, key words).

PO 2. Generate clarifying questions in order to comprehend text.

PO 3. Use graphic organizers in order to clarify the meaning of the text.

PO 4. Connect information and events in text to experience and to related text and sources.

PO 5. Apply knowledge of organizational structures (e.g., chronological order, sequence-time order, cause and effect relationships, logical order, classification schemes, problem-solution) of text to aid comprehension.

Strand 2: Comprehending Literary Text

Comprehending Literary Text identifies the comprehension strategies that are specific in the study of a variety of literature.

Concept 1: Elements of Literature

Identify, analyze, and apply knowledge of the structures and elements of literature.

PO 1. Evaluate the author's use of literary elements:

- theme (moral, lesson, meaning, message, view or comment on life),
- point of view (e.g., first vs. third, limited vs. omniscient),
- characterization (qualities, motives, actions, thoughts, dialogue, development, interactions),
- setting (time of day or year, historical period, place, situation), and
- plot (exposition, major and minor conflicts, rising action, climax, falling action, and resolution).

PO 2. Interpret figurative language, including, personification, hyperbole, symbolism, allusion, imagery, extended metaphor/conceit, and allegory with emphasis upon how the writer uses language to evoke readers' emotions.

PO 3. Analyze the way in which the theme or meaning of a selection represents a view or comment on life, providing textual evidence for the identified theme.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 11

PO 4. Explain the writer's use of irony, contradictions, paradoxes, incongruities, and ambiguities in a literary selection.

PO 5. Analyze an author's development of time and sequence through the use of complex literary devices such as foreshadowing and flashbacks.

PO 6. Explain how meaning is enhanced through various features of poetry, including sound (e.g., rhythm, repetition, alliteration, consonance, assonance), structure (e.g., meter, rhyme scheme), and graphic elements (e.g., line length, punctuation, word position).

Concept 2: Historical and Cultural Aspects of Literature

Recognize and apply knowledge of the historical and cultural aspects of American, British, and world literature.

PO 1. *Describe the historical and cultural aspects found in cross-cultural works of literature.*

PO 2. Relate literary works to the traditions, themes, and issues of their eras.

PO 3. Analyze culturally or historically significant literary works of American literature that reflect our major literary periods and traditions.

Strand 3: Comprehending Informational Text

Comprehending Informational Text delineates specific and unique skills that are required to understand the wide array of informational text that is a part of our day-to-day experiences.

Concept 1: Expository Text

Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.

PO 1. Critique the consistency and clarity of the text's purposes.

PO 2. Distinguish among different kinds of evidence used to support conclusions (e.g., logical, empirical, anecdotal).

PO 3. Make relevant inferences by synthesizing concepts and ideas from a single reading selection.

PO 4. Compare (and contrast) readings on the same topic, by explaining how authors reach the same or different conclusions based upon differences in evidence, reasoning, assumptions, purposes, beliefs, or biases.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 11

Concept 2: Functional Text

Identify, analyze, and apply knowledge of the purpose, structures, clarity, and relevancy of functional text.

PO 1. Analyze the structures of functional text (e.g., their format, graphics and headers) to determine how authors use these features to achieve their purposes.

Concept 3: Persuasive Text

Explain basic elements of argument in text and their relationship to the author's purpose and use of persuasive strategies.

PO 1. Analyze the power, validity, and truthfulness of the arguments advanced in persuasive text.

PO 2. Evaluate the arguments an author uses in a document to refute opposing arguments and address reader concerns.

PO 3. *Identify unsupported inferences or fallacious reasoning in arguments advanced in persuasive text.*

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 12

Strand 1: Reading Process

Reading Process consists of the five critical components of reading, which are Phonemic Awareness, Phonics, Fluency, Vocabulary and Comprehension of connected text. These elements support each other and are woven together to build a solid foundation of linguistic understanding for the reader.

Concept 1: Print Concepts

Demonstrate understanding of print concepts.

(Grades K-3)

Concept 2: Phonemic Awareness

Identify and manipulate the sounds of speech.

(Grades K-3)

Concept 3: Phonics

Decode words, using knowledge of phonics, syllabication, and word parts.

(Grades K-3)

Concept 4: Vocabulary

Acquire and use new vocabulary in relevant contexts.

PO 1. Draw inferences about meaning of new vocabulary, based on knowledge of linguistic roots and affixes (e.g., Latin, Greek, Anglo-Saxon).

PO 2. Identify the meaning of metaphors based on literary allusions and conceits.

Concept 5: Fluency

Read fluently.

PO 1. Read from a variety of genres with accuracy, automaticity (immediate recognition), and prosody (expression).

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 12

Concept 6: Comprehension Strategies

Employ strategies to comprehend text.

PO 1. Predict text content using prior knowledge and text features (e.g., illustrations, titles, topic sentences, key words).

PO 2. Generate clarifying questions in order to comprehend text.

PO 3. Use graphic organizers in order to clarify the meaning of the text.

PO 4. Connect information and events in text to experience and to related text and sources.

PO 5. Apply knowledge of organizational structures (e.g., chronological order, sequence-time order, cause and effect relationships, logical order, classification schemes, problem-solution) of text to aid comprehension.

Strand 2: Comprehending Literary Text

Comprehending Literary Text identifies the comprehension strategies that are specific in the study of a variety of literature.

Concept 1: Elements of Literature

Identify, analyze, and apply knowledge of the structures and elements of literature.

PO 1. Evaluate the author's use of literary elements:

- *theme (moral, lesson, meaning, message, view or comment on life),*
- *point of view (e.g., first vs. third, limited vs. omniscient),*
- *characterization (qualities, motives, actions, thoughts, dialogue, development, interactions),*
- *setting (time of day or year, historical period, place, situation), and*
- *plot (exposition, major and minor conflicts, rising action, climax, falling action, and resolution).*

PO 2. Interpret figurative language, including, personification, hyperbole, symbolism, allusion, imagery, extended metaphor/conceit, and allegory with emphasis upon how the writer uses language to evoke readers' emotions.

PO 3. Analyze a writer's word choice and imagery as a means to appeal to the reader's senses and to set the tone, providing evidence from the text to support the analysis.

PO 4. Compare (and contrast) literary texts that express a universal theme, providing textual evidence (e.g., examples, details, quotations) as support for the identified theme.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 12

PO 5. Analyze characteristics of sub genres (e.g., satire, parody, allegory) that overlap or cut across the lines of genre classifications such as poetry, novel, drama, short story, essay or editorial.

PO 6. Describe the function of dialogue, scene design, soliloquies, asides, and/or character foils in dramatic literature.

PO 7. Explain how meaning is enhanced through various features of poetry, including sound (e.g., rhythm, repetition, alliteration, consonance, assonance), structure (e.g., meter, rhyme scheme), graphic elements (e.g., line length, punctuation, word position).

Concept 2: Historical and Cultural Aspects of Literature

Recognize and apply knowledge of the historical and cultural aspects of American, British, and world literature.

PO 1. *Describe the historical and cultural aspects found in cross-cultural works of literature.*

PO 2. Relate literary works and their authors to the seminal ideas of their eras.

PO 3. Analyze culturally or historically significant literary works of British and world literature that reflect the major literary periods and traditions.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

READING STANDARD ARTICULATED BY GRADE LEVEL

GRADE 12

Strand 3: Comprehending Informational Text

Comprehending Informational Text delineates specific and unique skills that are required to understand the wide array of informational text that is a part of our day-to-day experiences.

Concept 1: Expository Text

Identify, analyze, and apply knowledge of the purpose, structures, and elements of expository text.

PO 1. Critique the effectiveness of the organizational pattern (e.g., logic, focus, consistency, coherence, visual appeal) of expository text.

PO 2. Determine the accuracy and truthfulness of one source of information by examining evidence offered in the material itself and by referencing and comparing the evidence with information available from multiple sources.

PO 3. Evaluate the evidence used to support the author's perspective contained within both primary and secondary sources. (Connected to Research Strand in Writing)

PO 4. Compare (and contrast) readings on the same topic, by explaining how authors reach the same or different conclusions based upon differences in evidence, reasoning, assumptions, purposes, beliefs, biases, and argument.

PO 5. Identify an author's implicit and stated assumptions about a subject, based upon evidence in the selection.

Concept 2: Functional Text

Identify, analyze, and apply knowledge of the purpose, structures, clarity, and relevancy of functional text.

PO 1. Analyze how the patterns of organization, hierarchic structures, repetition of key ideas, syntax, and word choice influence the clarity and understandability of functional text.

PO 2. Evaluate the logic within functional text.

Concept 3: Persuasive Text

Explain basic elements of argument in text and their relationship to the author's purpose and use of persuasive strategies.

PO 1. Evaluate the merit of an argument, action, or policy by citing evidence offered in the material itself and by comparing the evidence with information available in other sources.

PO 2. Evaluate the effectiveness of an author's use of rhetorical devices in a persuasive argument.

PO 3. *Identify unsupported inferences or fallacious reasoning in arguments advanced in persuasive text.*

PO 4. Evaluate persuasive sources for adherence to ethics.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex reading selections.

Writing Standard Articulated
by Grade Level 2004

High School

Writing Standard Articulated by Grade Level

Grade 9

Strand 1: Writing Process

Research has established the major steps of the writing process. These steps are identified in the five concepts of this strand, each supported with specific performance objectives. While all steps are needed and used by effective writers as they compose text, different skills may be emphasized in individual assignments. These steps may be used recursively as a piece moves toward completion. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress.

Concept 1: Prewriting

Prewriting includes using strategies to generate, plan, and organize ideas for specific purposes.

*PO 1. Generate ideas through a variety of activities (e.g., brainstorming, notes and logs, **graphic organizers**, record of writing ideas and discussion, printed material or other sources).*

PO 2. Determine the purpose (e.g., to entertain, to inform, to communicate, to persuade, to explain) of an intended writing piece.

PO 3. Determine the intended audience of a writing piece.

*PO 4. Establish a **controlling idea** appropriate to the type of writing.*

*PO 5. Use organizational strategies (e.g., outline, chart, table, graph, **Venn Diagram**, **web**, **story map**, **plot pyramid**) to plan writing.*

PO 6. Maintain a record (e.g., lists, journals, folders, notebooks) of writing ideas.

*PO 7. Use **time management strategies**, when appropriate, to produce a writing product within a set time period.*

Concept 2: Drafting

Drafting incorporates prewriting activities to create a first draft containing necessary elements for a specific purpose.

*PO 1. Use a **prewriting plan** to develop the **main idea(s)** with supporting details.*

PO 2. Sequence ideas into a cohesive, meaningful order.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.

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Arizona Department of Education – Standards Based Teaching and Learning

Approved June 28, 2004

Writing Standard Articulated by Grade Level

Grade 9

Concept 3: Revising
Revising includes evaluating and refining the rough draft for clarity and effectiveness. (Ask: Does this draft say what you want it to say?)
<i>PO 1. Evaluate the draft for use of ideas and content, organization, voice, word choice, and sentence fluency. (See Strand 2)</i>
<i>PO 2. Add details to the draft to more effectively accomplish the purpose.</i>
<i>PO 3. Delete irrelevant and/or redundant information from the draft to more effectively accomplish the purpose.</i>
<i>PO 4. Rearrange words, sentences, and paragraphs in the draft in order to clarify the meaning or to enhance the writing style.</i>
<i>PO 5. Add transitional words and phrases to the draft in order to clarify meaning or enhance the writing style.</i>
<i>PO 6. Use a variety of sentence structures (i.e., simple, compound, complex) to improve sentence fluency in the draft.</i>
<i>PO 7. Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to refine the draft.</i>
<i>PO 8. Use resources and reference materials (e.g., thesaurus, dictionary) to select more effective and precise language.</i>

Concept 4: Editing
Editing includes proofreading and correcting the draft for conventions.
<i>PO 1. Identify punctuation, spelling, and grammar and usage errors in the draft. (See Strand 2)</i>
<i>PO 2. Use resources (e.g., dictionary, word lists, spelling/grammar checkers) to correct conventions.</i>
<i>PO 3. Apply proofreading marks to indicate errors in conventions.</i>
<i>PO 4. Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to edit the draft.</i>

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Writing Standard Articulated by Grade Level

Grade 9

Concept 5: Publishing Publishing includes formatting and presenting a final product for the intended audience.
PO 1. Prepare writing that follows a format appropriate for the purpose (e.g., for display, sharing with others, submitting to a publication).
PO 2. Include such techniques as principles of design (e.g., margins, tabs, spacing, columns) and graphics (e.g., drawings, charts, graphs), when applicable, to enhance the final product.
<i>PO 3. Write legibly.</i>

Strand 2: Writing Components

This strand focuses on the elements of effective writing. Good writing instruction incorporates multiple performance objectives into an integrated experience of learning for the student. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress. The order of the concepts and performance objectives is not intended to indicate a progression or hierarchy for writing instruction. Instructional activities may focus on just one concept or many.

Concept 1: Ideas and Content Writing is clear and focused, holding the reader's attention throughout. Main ideas stand out and are developed by strong support and rich details. Purpose is accomplished.
PO 1. Maintain a clear, narrow focus to support the topic.
PO 2. Write with an identifiable purpose and for a specific audience.
PO 3. Provide sufficient, relevant, and carefully selected details for support.
PO 4. Demonstrate a thorough, balanced explanation of the topic.
PO 5. Include ideas and details that show original perspective and insights.

Concept 2: Organization Organization addresses the structure of the writing and integrates the central meaning and patterns that hold the piece together.
<i>PO 1. Use a structure that fits the type of writing (e.g., letter format, narrative, play, essay).</i>
<i>PO 2. Include a strong beginning or introduction that draws in the reader.</i>

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Writing Standard Articulated by Grade Level

Grade 9

<i>PO 3. Place details appropriately to support the main idea.</i>
<i>PO 4. Use effective transitions among all elements (sentences, paragraphs, and ideas).</i>
PO 5. Employ a variety of paragraphing strategies (e.g., topical, chronological, spatial) appropriate to application and purpose.
<i>PO 6. Create an ending that provides a sense of resolution or closure.</i>

Concept 3: Voice Voice will vary according to the type of piece, but should be appropriately formal or casual, distant or personal, depending on the audience and purpose.
<i>PO 1. Show awareness of the audience through word choice, style, and an appropriate connection with, or distance from, the audience.</i>
<i>PO 2. Convey a sense of identity through originality, sincerity, liveliness, or humor appropriate to topic and type of writing.</i>
<i>PO 3. Choose appropriate voice (e.g., formal, informal, academic discourse) for the application.</i>
PO 4. Use engaging and expressive language that shows a commitment to the topic.
PO 5. Use language appropriate to purpose, topic, and audience.

Concept 4: Word Choice Word choice reflects the writer's use of specific words and phrases to convey the intended message and employs a variety of words that are functional and appropriate to the audience and purpose.
<i>PO 1. Use accurate, specific, powerful words and phrases that effectively convey the intended message.</i>
<i>PO 2. Use vocabulary that is original, varied, and natural.</i>
PO 3. Use words that evoke clear images.
PO 4. Use literal and figurative language intentionally when appropriate. (See R09-S2C1-02, R10-S2C1-02, R11-S2C1-02, R12-S2C1-02)
PO 5. Use clichés only when appropriate to purpose.

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Writing Standard Articulated by Grade Level

Grade 9

Concept 5: Sentence Fluency
Fluency addresses the rhythm and flow of language. Sentences are strong and varied in structure and length.
PO 1. Use a variety of sentence structures (simple, compound, complex, and compound-complex) and lengths to reinforce relationships among ideas and to enhance the flow of the writing.
PO 2. Show extensive variation in sentence beginnings, lengths, and patterns to enhance the flow of the writing.
PO 3. Demonstrate a flow that is natural and powerful when read aloud.

Concept 6: Conventions	
Conventions addresses the mechanics of writing, including capitalization, punctuation, spelling, grammar and usage, and paragraph breaks.	
PO 1. Use capitals correctly for: <ul style="list-style-type: none"> a. proper nouns: <ul style="list-style-type: none"> • <i>holidays</i> • <i>place/regional names</i> • <i>languages</i> • <i>historical events</i> • <i>organizations</i> • <i>academic courses (e.g., algebra/Algebra I)</i> • <i>product names</i> 	<ul style="list-style-type: none"> b. <i>words used as names (e.g., Grandpa, Aunt Lyn)</i> c. <i>literary titles (book, story, poem, play, song)</i> d. <i>titles</i> e. <i>abbreviations</i> f. proper adjectives (e.g., German shepherd, Chinese restaurant)
PO 2. Use commas to correctly punctuate: <ul style="list-style-type: none"> a. <i>items in a series</i> b. <i>greetings and closings of letters</i> c. <i>introductory words, phrases and clauses</i> d. direct address 	<ul style="list-style-type: none"> e. interruptors f. compound sentences g. appositives h. dialogue
PO 3. Use quotation marks to punctuate: <ul style="list-style-type: none"> a. dialogue b. <i>titles</i> c. <i>exact words from sources</i> 	
PO 4. Use underlining or italics to correctly identify titles and vessels (e.g., ships, spacecrafts, planes, trains).	
PO 5. Use colons to punctuate business letter salutations and sentences introducing lists.	
PO 6. Use semicolons to punctuate compound and compound-complex sentences when appropriate.	

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Writing Standard Articulated by Grade Level

Grade 9

<i>PO 7. Use apostrophes to punctuate:</i> <ul style="list-style-type: none"><i>a. contractions</i><i>b. singular possessives</i><i>c. plural possessives</i>
PO 8. Use hyphens, dashes, parentheses, ellipses, and brackets correctly.
<i>PO 9. Spell words correctly.</i>
PO 10. Use paragraph breaks to reinforce the organizational structure, including dialogue .
PO 11. Demonstrate control of grammar and usage in writing: <ul style="list-style-type: none">a. parts of speechb. verb forms and tensesc. subject/verb agreementd. pronoun/antecedent agreemente. parallel structuref. comparative and superlative degrees of adjectivesg. modifier placementh. homonyms
PO 12. Use appropriate format, according to type of writing, to cite sources (e.g., Chicago, APA, MLA, UPI, any other recognized style manual).

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Writing Standard Articulated by Grade Level

Grade 9

Strand 3: Writing Applications

Writing skills particular to the applications listed here may be taught across the curriculum, although some applications may lend themselves more readily to specific content areas. It is imperative that students write in all content areas in order to increase their communication skills, and ultimately to improve their understanding of content area concepts. When appropriate, other content standards are referenced to show interdisciplinary connections.

Concept 1: Expressive

Expressive writing includes **personal narratives**, stories, poetry, songs, and dramatic pieces. Writing may be based on real or imagined events.

PO 1. Write a **personal narrative** that:

- a. describes a sequence of events, focusing on one incident experienced by the author
- b. sets scenes and incidents in specific times and places
- c. describes with specific details the sights, sounds and smells of the scenes
- d. uses **figurative language** (e.g., **simile**, **metaphor**, **personification**)

Example: Write an autobiographical account of a time when you had to make an important decision.

Concept 2: Expository

Expository writing includes non-fiction writing that describes, explains, informs, or summarizes ideas and content. The writing supports a **thesis** based on research, observation, and/or experience.

PO 1. Write an explanatory, multi-paragraph essay that:

- a. includes background information to establish the **thesis (hypothesis, essential question)**, as appropriate
- b. states a **thesis (hypothesis, essential question)** with a narrow focus
- c. includes evidence in support of a **thesis (hypothesis, essential question)** in the form of details, facts, examples, or reasons
- d. communicates information and ideas from **primary and/or secondary sources** accurately and coherently, as appropriate
- e. attributes sources of information as appropriate
- f. includes a topic sentence for each body paragraph
- g. includes relevant factors and variables that need to be considered
- h. includes visual aids to organize and record information on charts, data tables, maps and graphs, as appropriate
- i. includes an effective conclusion

Example: Write a report of a science experiment that was conducted in class, describing both the process and the scientific conclusions.

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Writing Standard Articulated by Grade Level

Grade 9

Concept 3: Functional

Functional writing provides specific directions or information related to real-world tasks. This includes letters, memos, schedules, directories, signs, manuals, forms, recipes, and technical pieces for specific content areas.

PO 1. Write a business letter that:

- a. presents information purposefully and succinctly to meet the needs of the intended audience
- b. follows a conventional business letter format (block, modified block, email)

Example: Write a letter of complaint expressing a consumer problem you've experienced.

PO 2. Address an envelope for correspondence that includes:

- a. an appropriate return address
- b. an appropriate recipient address

Concept 4: Persuasive

Persuasive writing is used for the purpose of influencing the reader. The author presents an issue and expresses an opinion in order to convince an audience to agree with the opinion or to take a particular action.

PO 1. Write a persuasive composition (e.g., business letter, essay) that:

- a. states a position or claim
- b. presents detailed **evidence**, examples, and reasoning to support effective arguments and emotional appeals
- c. attributes sources of information when appropriate
- d. structures ideas
- e. addresses the reader's concerns

Example: Write a letter to the principal to persuade him/her to support your views on some educational policy (e.g., open campus, cheating, year-round school, scheduling)

(See R09-S3C3)

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Writing Standard Articulated by Grade Level

Grade 9

Concept 5: Literary Response

Literary response is the writer's reaction to a literary selection. The response includes the writer's interpretation, analysis, opinion, and/or feelings about the piece of literature and selected elements within it.

PO 1. Write a literary analysis that:

- a. describes the author's use of **literary elements** (i.e., **theme, point of view, characterization, setting, plot**)
- b. explains different elements of **figurative language**, (i.e., **simile, metaphor, personification, hyperbole, symbolism, allusion, and imagery**) in a literary selection
- c. compares works within a literary **genre** that deal with similar themes (e.g., compare two short stories or two poems)

Example: Write an essay about different characters in "The Necklace" by Guy de Maupassant explaining how each serves to move forward the plot.

(See R09-S2C1)

Concept 6: Research

Research writing is a process in which the writer identifies a topic or question to be answered. The writer locates and evaluates information about the topic or question, and then organizes, summarizes, and synthesizes the information into a finished product.

PO 1. Write an essay that:

- a. incorporates **evidence** in support of a **thesis**/claim
- b. integrates information from two or more pieces of research information
- c. integrates direct quotes
- d. cites sources

Example: Write an essay about water conservation in the desert.

(See R09-S3C1-03 -04, -05; R10-S3C1-03 -04, -05)

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Writing Standard Articulated by Grade Level

Grade 10

Strand 1: Writing Process

Research has established the major steps of the writing process. These steps are identified in the five concepts of this strand, each supported with specific performance objectives. While all steps are needed and used by effective writers as they compose text, different skills may be emphasized in individual assignments. These steps may be used recursively as a piece moves toward completion. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress.

Concept 1: Prewriting

Prewriting includes using strategies to generate, plan, and organize ideas for specific purposes.

*PO 1. Generate ideas through a variety of activities (e.g., brainstorming, notes and logs, **graphic organizers**, record of writing ideas and discussion, printed material or other sources).*

PO 2. Determine the purpose (e.g., to entertain, to inform, to communicate, to persuade, to explain) of an intended writing piece.

PO 3. Determine the intended audience of a writing piece.

*PO 4. Establish a **controlling idea** appropriate to the type of writing.*

*PO 5. Use organizational strategies (e.g., outline, chart, table, graph, **Venn Diagram, web, story map, plot pyramid**) to plan writing.*

PO 6. Maintain a record (e.g., lists, journals, folders, notebooks) of writing ideas.

*PO 7. Use **time management strategies**, when appropriate, to produce a writing product within a set time period.*

Concept 2: Drafting

Drafting incorporates prewriting activities to create a first draft containing necessary elements for a specific purpose.

*PO 1. Use a **prewriting plan** to develop the **main idea(s)** with supporting details.*

PO 2. Sequence ideas into a cohesive, meaningful order.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.

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Writing Standard Articulated by Grade Level

Grade 10

Concept 3: Revising
Revising includes evaluating and refining the rough draft for clarity and effectiveness. (Ask: Does this draft say what you want it to say?)
<i>PO 1. Evaluate the draft for use of ideas and content, organization, voice, word choice, and sentence fluency. (See Strand 2)</i>
<i>PO 2. Add details to the draft to more effectively accomplish the purpose.</i>
<i>PO 3. Delete irrelevant and/or redundant information from the draft to more effectively accomplish the purpose.</i>
<i>PO 4. Rearrange words, sentences, and paragraphs in the draft in order to clarify the meaning or to enhance the writing style.</i>
<i>PO 5. Add transitional words and phrases to the draft in order to clarify meaning or enhance the writing style.</i>
<i>PO 6. Use a variety of sentence structures (i.e., simple, compound, complex) to improve sentence fluency in the draft.</i>
<i>PO 7. Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to refine the draft.</i>
<i>PO 8. Use resources and reference materials (e.g., thesaurus, dictionary) to select more effective and precise language.</i>

Concept 4: Editing
Editing includes proofreading and correcting the draft for conventions.
<i>PO 1. Identify punctuation, spelling, and grammar and usage errors in the draft. (See Strand 2)</i>
<i>PO 2. Use resources (e.g., dictionary, word lists, spelling/grammar checkers) to correct conventions.</i>
<i>PO 3. Apply proofreading marks to indicate errors in conventions.</i>
<i>PO 4. Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to edit the draft.</i>

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Writing Standard Articulated by Grade Level

Grade 10

Concept 5: Publishing
Publishing involves formatting and presenting a final product for the intended audience.
PO 1. Prepare writing that follows a format appropriate for the purpose (e.g., for display, sharing with others, submitting to a publication).
PO 2. Include such techniques as principles of design (e.g., margins, tabs, spacing, columns) and graphics (e.g., drawings, charts, graphs), when applicable, to enhance the final product.
<i>PO 3. Write legibly.</i>

Strand 2: Writing Components

This strand focuses on the elements of effective writing. Good writing instruction incorporates multiple performance objectives into an integrated experience of learning for the student. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress. The order of the concepts and performance objectives is not intended to indicate a progression or hierarchy for writing instruction. Instructional activities may focus on just one concept or many.

Concept 1: Ideas and Content
Writing is clear and focused, holding the reader's attention throughout. Main ideas stand out and are developed by strong support and rich details. Purpose is accomplished.
PO 1. Maintain a clear, narrow focus to support the topic.
PO 2. Write with an identifiable purpose and for a specific audience.
PO 3. Provide sufficient, relevant, and carefully selected details for support.
PO 4. Demonstrate a thorough, balanced explanation of the topic.
PO 5. Include ideas and details that show original perspective and insights.

Concept 2: Organization
Organization addresses the structure of the writing and integrates the central meaning and patterns that hold the piece together.
<i>PO 1. Use a structure that fits the type of writing (e.g., letter format, narrative, play, essay).</i>
<i>PO 2. Include a strong beginning or introduction that draws in the reader.</i>
<i>PO 3. Place details appropriately to support the main idea.</i>

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.

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Writing Standard Articulated by Grade Level

Grade 10

<i>PO 4. Use effective transitions among all elements (sentences, paragraphs, and ideas).</i>
PO 5. Employ a variety of paragraphing strategies (e.g., topical, chronological, spatial) appropriate to application and purpose.
<i>PO 6. Create an ending that provides a sense of resolution or closure.</i>

Concept 3: Voice Voice will vary according to the type of piece, but should be appropriately formal or casual, distant or personal, depending on the audience and purpose.
<i>PO 1. Show awareness of the audience through word choice, style, and an appropriate connection with, or distance from, the audience.</i>
<i>PO 2. Convey a sense of identity through originality, sincerity, liveliness, or humor appropriate to topic and type of writing.</i>
<i>PO 3. Choose appropriate voice (e.g., formal, informal, academic discourse) for the application.</i>
PO 4. Use engaging and expressive language that shows a commitment to the topic.
PO 5. Use language appropriate to purpose, topic, and audience.

Concept 4: Word Choice Word choice reflects the writer's use of specific words and phrases to convey the intended message and employs a variety of words that are functional and appropriate to the audience and purpose.
<i>PO 1. Use accurate, specific, powerful words and phrases that effectively convey the intended message.</i>
<i>PO 2. Use vocabulary that is original, varied, and natural.</i>
PO 3. Use words that evoke clear images.
PO 4. Use literal and figurative language intentionally when appropriate. (See R09-S2C1-02, R10-S2C1-02, R11-S2C1-02, R12-S2C1-02)
PO 5. Use clichés only when appropriate to purpose.

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Writing Standard Articulated by Grade Level

Grade 10

Concept 5: Sentence Fluency
Fluency addresses the rhythm and flow of language. Sentences are strong and varied in structure and length.
PO 1. Use a variety of sentence structures (simple, compound, complex, and compound-complex) and lengths to reinforce relationships among ideas and to enhance the flow of the writing.
PO 2. Show extensive variation in sentence beginnings, lengths, and patterns to enhance the flow of the writing.
PO 3. Demonstrate a flow that is natural and powerful when read aloud.

Concept 6: Conventions	
Conventions addresses the mechanics of writing, including capitalization, punctuation, spelling, grammar and usage, and paragraph breaks.	
PO 1. Use capitals correctly for:	
a. proper nouns: <ul style="list-style-type: none"> holidays place/regional names languages historical events organizations academic courses (e.g., algebra/Algebra I) product names 	b. words used as names (e.g., Grandpa, Aunt Lyn) c. literary titles (book, story, poem, play, song) d. titles e. abbreviations f. proper adjectives (e.g., German shepherd, Chinese restaurant)
PO 2. Use commas to correctly punctuate:	
a. items in a series b. greetings and closings of letters c. introductory words, phrases and clauses d. direct address	e. interruptors f. compound sentences g. appositives h. dialogue
PO 3. Use quotation marks to punctuate:	
a. dialogue b. titles c. exact words from sources	
PO 4. Use underlining or italics to correctly identify titles and vessels (e.g., ships, spacecrafts, planes, trains).	
PO 5. Use colons to punctuate business letter salutations and sentences introducing lists.	
PO 6. Use semicolons to punctuate compound and compound-complex sentences when appropriate.	

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Writing Standard Articulated by Grade Level

Grade 10

<i>PO 7. Use apostrophes to punctuate:</i> <ul style="list-style-type: none"><i>a. contractions</i><i>b. singular possessives</i><i>c. plural possessives</i>
PO 8. Use hyphens, dashes, parentheses, ellipses, and brackets correctly.
<i>PO 9. Spell words correctly.</i>
PO 10. Use paragraph breaks to reinforce the organizational structure, including dialogue .
PO 11. Demonstrate control of grammar and usage in writing: <ul style="list-style-type: none">a. parts of speechb. verb forms and tensesc. subject/verb agreementd. pronoun/antecedent agreemente. parallel structuref. comparative and superlative degrees of adjectivesg. modifier placementh. homonyms
PO 12. Use appropriate format, according to type of writing, to cite sources (e.g., Chicago, APA, MLA, UPI, any other recognized style manual).

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Writing Standard Articulated by Grade Level

Grade 10

Strand 3: Writing Applications

Writing skills particular to the applications listed here may be taught across the curriculum, although some applications may lend themselves more readily to specific content areas. It is imperative that students write in all content areas in order to increase their communication skills, and ultimately to improve their understanding of content area concepts. When appropriate, other content standards are referenced to show interdisciplinary connections.

Concept 1: Expressive

Expressive writing includes **personal narratives**, stories, poetry, songs, and dramatic pieces. Writing may be based on real or imagined events.

PO 1. Write a **reflective personal narrative** that:

- a. describes a sequence of events, communicating the significance of the events to the audience
- b. sets scenes and incidents in specific times and places
- c. describes with specific details the sights, sounds, and smells of the scenes
- d. describes with specific details the actions, movements, gestures, and feelings of the characters
- e. uses **interior monologue**
- f. uses **figurative language** (e.g., **simile**, **metaphor**, **personification**)

Example: Select a quotation that is particularly meaningful. Explain the significance of the quotation.

Concept 2: Expository

Expository writing includes non-fiction writing that describes, explains, or summarizes ideas and content. The writing supports a **thesis** based on research, observation, and/or experience.

PO 1. Write an explanatory, multi-paragraph essay that:

- a. includes background information to establish the **thesis (hypothesis, essential question)**, as appropriate
- b. states a **thesis (hypothesis, essential question)** with a narrow focus
- c. includes **evidence** in support of a **thesis (hypothesis, essential question)** in the form of details, facts, examples, or reasons
- d. communicates information and ideas from **primary and/or secondary sources** accurately and coherently, as appropriate
- e. attributes sources of information, as appropriate
- f. includes a topic sentence for each body paragraph
- g. includes relevant factors and variables that need to be considered
- h. includes visual aids to organize and record information on charts, data tables, maps and graphs, as appropriate
- i. includes an effective conclusion

Example: Discuss three reasons why the bombing of Hiroshima was a controversial act.

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Writing Standard Articulated by Grade Level

Grade 10

Concept 3: Functional

Functional writing provides specific directions or information related to real-world tasks. This includes letters, memos, schedules, directories, signs, manuals, forms, recipes, and technical pieces for specific content areas.

PO 1. Write a business letter and/or memo that:

- a. presents information purposefully and succinctly to meet the needs of the intended audience
- b. follows a conventional format (block, modified block, memo, email)

Example: Write a letter requesting an informational interview with a person in a career area that interests you.

PO 2. Address an envelope for correspondence that includes:

- a. an appropriate return address
- b. an appropriate recipient address

Concept 4: Persuasive

Persuasive writing is used for the purpose of influencing the reader. The author presents an issue and expresses an opinion in order to convince an audience to agree with the opinion or to take a particular action.

PO 1. Write a persuasive composition (e.g., business letter, essay, letter to the editor) that:

- a. states a position or claim
- b. presents detailed **evidence**, examples, and reasoning to support effective arguments and emotional appeals
- c. attributes sources of information when appropriate
- d. structures ideas
- e. addresses the reader's concerns

Example: Write a letter to a television network to persuade the network to keep a program on the air despite low ratings.

(See R10-S3C3)

Concept 5: Literary Response

Literary response is the writer's reaction to a literary selection. The response includes the writer's interpretation, analysis, opinion, and/or feelings about the piece of literature and selected elements within it.

PO 1. Write a literary analysis that:

- a. analyzes the author's use of **literary elements** (i.e., **theme, point of view, characterization, setting, plot**)
- b. analyzes different elements of **figurative language** (i.e., **simile, metaphor, personification, hyperbole, symbolism, allusion, and imagery**) in a literary selection
- c. compares the illustration of the same **theme** in two different literary **genres**, using their structural features as the basis for the comparison (e.g., novel and play, poem and short story)
- d. identifies how an author's choice of words and **imagery** sets the **tone** and advances the work's **theme**

Example: Write an essay explaining Gwendolyn Brook's use of word choice in "We Real Cool" to communicate its theme.

(See R10-S2C1)

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Arizona Department of Education – Standards Based Teaching and Learning

Approved June 28, 2004

Writing Standard Articulated by Grade Level

Grade 10

Concept 6: Research

Research writing is a process in which the writer identifies a topic or question to be answered. The writer locates and evaluates information about the topic or question, and then organizes, summarizes, and synthesizes the information into a finished product.

PO 1. Write a research report that:

- a. incorporates **evidence** in support of a thesis/claim
- b. integrates information from two or more pieces of primary and/or secondary research information
- c. makes distinctions between the relative value and significance of specific data, facts, and ideas
- d. integrates direct quotes
- e. uses **internal citations**
- f. includes a works cited, bibliography, or reference page

Example: Write a report on the Globe Theatre explaining its significance in the development of Shakespeare's works.

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Arizona Department of Education – Standards Based Teaching and Learning

Approved June 28, 2004

Writing Standard Articulated by Grade Level

Grade 11

Strand 1: Writing Process

Research has established the major steps of the writing process. These steps are identified in the five concepts of this strand, each supported with specific performance objectives. While all steps are needed and used by effective writers as they compose text, different skills may be emphasized in individual assignments. These steps may be used recursively as a piece moves toward completion. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress.

Concept 1: Prewriting

Prewriting includes using strategies to generate, plan, and organize ideas for specific purposes.

*PO 1. Generate ideas through a variety of activities (e.g., brainstorming, notes and logs, **graphic organizers**, record of writing ideas and discussion, printed material or other sources).*

PO 2. Determine the purpose (e.g., to entertain, to inform, to communicate, to persuade, to explain) of an intended writing piece.

PO 3. Determine the intended audience of a writing piece.

*PO 4. Establish a **controlling idea** appropriate to the type of writing.*

*PO 5. Use organizational strategies (e.g., outline, chart, table, graph, **Venn Diagram, web, story map, plot pyramid**) to plan writing.*

PO 6. Maintain a record (e.g., lists, journals, folders, notebooks) of writing ideas.

*PO 7. Use **time management strategies**, when appropriate, to produce a writing product within a set time period.*

Concept 2: Drafting

Drafting incorporates prewriting activities to create a first draft containing necessary elements for a specific purpose.

*PO 1. Use a **prewriting plan** to develop the **main idea(s)** with supporting details.*

PO 2. Sequence ideas into a cohesive, meaningful order.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.

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Arizona Department of Education – Standards Based Teaching and Learning

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Writing Standard Articulated by Grade Level

Grade 11

Concept 3: Revising Revising includes evaluating and refining the rough draft for clarity and effectiveness. (Ask: Does this draft say what you want it to say?)
<i>PO 1. Evaluate the draft for use of ideas and content, organization, voice, word choice, and sentence fluency. (See Strand 2)</i>
<i>PO 2. Add details to the draft to more effectively accomplish the purpose.</i>
<i>PO 3. Delete irrelevant and/or redundant information from the draft to more effectively accomplish the purpose.</i>
<i>PO 4. Rearrange words, sentences, and paragraphs in the draft in order to clarify the meaning or to enhance the writing style.</i>
<i>PO 5. Add transitional words and phrases to the draft in order to clarify meaning or enhance the writing style.</i>
<i>PO 6. Use a variety of sentence structures (i.e., simple, compound, complex) to improve sentence fluency in the draft.</i>
<i>PO 7. Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to refine the draft.</i>
<i>PO 8. Use resources and reference materials (e.g., thesaurus, dictionary) to select more effective and precise language.</i>

Concept 4: Editing Editing includes proofreading and correcting the draft for conventions.
<i>PO 1. Identify punctuation, spelling, and grammar and usage errors in the draft. (See Strand 2)</i>
<i>PO 2. Use resources (e.g., dictionary, word lists, spelling/grammar checkers) to correct conventions.</i>
<i>PO 3. Apply proofreading marks to indicate errors in conventions.</i>
<i>PO 4. Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to edit the draft.</i>

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.

The bulleted (lettered) items within a performance objective indicate specific content to be taught.

Words shown in bold print are referenced in the glossary.

Writing Standard Articulated by Grade Level

Grade 11

Concept 5: Publishing
Publishing involves formatting and presenting a final product for the intended audience.
PO 1. Prepare writing that follows a format appropriate for the purpose (e.g., for display, sharing with others, submitting to a publication).
PO 2. Include such techniques as principles of design (e.g., margins, tabs, spacing, columns) and graphics (e.g., drawings, charts, graphs), when applicable, to enhance the final product.
<i>PO 3. Write legibly.</i>

Strand 2: Writing Components

This strand focuses on the elements of effective writing. Good writing instruction incorporates multiple performance objectives into an integrated experience of learning for the student. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress. The order of the concepts and performance objectives is not intended to indicate a progression or hierarchy for writing instruction. Instructional activities may focus on just one concept or many.

Concept 1: Ideas and Content
Writing is clear and focused, holding the reader's attention throughout. Main ideas stand out and are developed by strong support and rich details. Purpose is accomplished.
PO 1. Maintain a clear, narrow focus to support the topic.
PO 2. Write with an identifiable purpose and for a specific audience.
PO 3. Provide sufficient, relevant, and carefully selected details for support.
PO 4. Demonstrate a thorough, balanced explanation of the topic.
PO 5. Include ideas and details that show original perspective and insights.

Concept 2: Organization
Organization addresses the structure of the writing and integrates the central meaning and patterns that hold the piece together.
<i>PO 1. Use a structure that fits the type of writing (e.g., letter format, narrative, play, essay).</i>
<i>PO 2. Include a strong beginning or introduction that draws in the reader.</i>
<i>PO 3. Place details appropriately to support the main idea.</i>

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.

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Writing Standard Articulated by Grade Level

Grade 11

<i>PO 4. Use effective transitions among all elements (sentences, paragraphs, and ideas).</i>
PO 5. Employ a variety of paragraphing strategies (e.g., topical, chronological, spatial) appropriate to application and purpose.
<i>PO 6. Create an ending that provides a sense of resolution or closure.</i>

Concept 3: Voice Voice will vary according to the type of writing, but should be appropriately formal or casual, distant or personal, depending on the audience and purpose.
<i>PO 1. Show awareness of the audience through word choice, style, and an appropriate connection with, or distance from, the audience.</i>
<i>PO 2. Convey a sense of identity through originality, sincerity, liveliness, or humor appropriate to topic and type of writing.</i>
<i>PO 3. Choose appropriate voice (e.g., formal, informal, academic discourse) for the application.</i>
PO 4. Use engaging and expressive language that shows a commitment to the topic.
PO 5. Use language appropriate to purpose, topic, and audience.

Concept 4: Word Choice Word choice reflects the writer's use of specific words and phrases to convey the intended message and employs a variety of words that are functional and appropriate to the audience and purpose.
<i>PO 1. Use accurate, specific, powerful words and phrases that effectively convey the intended message.</i>
<i>PO 2. Use vocabulary that is original, varied, and natural.</i>
PO 3. Use words that evoke clear images.
PO 4. Use literal and figurative language intentionally when appropriate. (See R09-S2C1-02, R10-S2C1-02, R11-S2C1-02, R12-S2C1-02)
PO 5. Use clichés only when appropriate to purpose.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing.

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Writing Standard Articulated by Grade Level

Grade 11

Concept 5: Sentence Fluency
Fluency addresses the rhythm and flow of language. Sentences are strong and varied in structure and length.
PO 1. Use a variety of sentence structures (simple, compound, complex, and compound-complex) and lengths to reinforce relationships among ideas and to enhance the flow of the writing.
PO 2. Show extensive variation in sentence beginnings, lengths, and patterns to enhance the flow of the writing.
PO 3. Demonstrate a flow that is natural and powerful when read aloud.

Concept 6: Conventions	
Conventions addresses the mechanics of writing, including capitalization, punctuation, spelling, grammar and usage, and paragraph breaks.	
PO 1. Use capitals correctly for: <ul style="list-style-type: none"> a. proper nouns: <ul style="list-style-type: none"> • holidays • place/regional names • languages • historical events • organizations • academic courses (e.g., algebra/Algebra I) • product names 	<ul style="list-style-type: none"> b. words used as names (e.g., Grandpa, Aunt Lyn) c. literary titles (book, story, poem, play, song) d. titles e. abbreviations f. proper adjectives (e.g., German shepherd, Chinese restaurant)
PO 2. Use commas to correctly punctuate: <ul style="list-style-type: none"> a. items in a series b. greetings and closings of letters c. introductory words, phrases and clauses d. direct address 	<ul style="list-style-type: none"> e. interruptors f. compound sentences g. appositives h. dialogue
PO 3. Use quotation marks to punctuate: <ul style="list-style-type: none"> a. dialogue b. titles c. exact words from sources 	
PO 4. Use underlining or italics to correctly identify titles and vessels (e.g., ships, spacecrafts, planes, trains).	
PO 5. Use colons to punctuate business letter salutations and sentences introducing lists.	
PO 6. Use semicolons to punctuate compound and compound-complex sentences when appropriate.	

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Writing Standard Articulated by Grade Level

Grade 11

<i>PO 7. Use apostrophes to punctuate:</i> <ul style="list-style-type: none"><i>a. contractions</i><i>b. singular possessives</i><i>c. plural possessives</i>
PO 8. Use hyphens, dashes, parentheses, ellipses, and brackets correctly.
<i>PO 9. Spell words correctly.</i>
PO 10. Use paragraph breaks to reinforce the organizational structure, including dialogue.
PO 11. Demonstrate control of grammar and usage in writing: <ul style="list-style-type: none">a. parts of speechb. verb forms and tensesc. subject/verb agreementd. pronoun/antecedent agreemente. parallel structuref. comparative and superlative degrees of adjectivesg. modifier placementh. homonyms
PO 12. Use appropriate format, according to type of writing, to cite sources (e.g., Chicago, APA, MLA, UPI, any other recognized style manual).

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Writing Standard Articulated by Grade Level

Grade 11

Strand 3: Writing Applications

Writing skills particular to the applications listed here may be taught across the curriculum, although some applications may lend themselves more readily to specific content areas. It is imperative that students write in all content areas in order to increase their communication skills, and ultimately to improve their understanding of content area concepts. When appropriate, other content standards are referenced to show interdisciplinary connections.

Concept 1: Expressive

Expressive writing includes **personal narratives**, stories, poetry, songs, and dramatic pieces. Writing may be based on real or imagined events.

PO 1. Write in a variety of expressive forms (e.g. poetry, short story, and/or drama) that:

- a. use voice and style appropriate to audience and purpose
- b. organize ideas in writing to ensure coherence, logical progression, and support
- c. employ literary devices (e.g., **irony**, **conceit**, **foreshadowing**, **symbolism**) to enhance style and voice

Example: Write a contemporary version of "The Raven" by Edgar Allan Poe.

Concept 2: Expository

Expository writing includes non-fiction writing that describes, explains, or summarizes ideas and content. The writing supports a **thesis** based on research, observation, and/or experience.

PO 1. Write a multi-paragraph essay (e.g., compare/contrast, cause/effect, process) that:

- a. *includes background information to establish the **thesis (hypothesis, essential question)**, as appropriate*
- b. *states a **thesis (hypothesis, essential question)** with a narrow focus*
- c. *includes evidence in support of a **thesis (hypothesis, essential question)** in the form of details, facts, examples, or reasons*
- d. *communicates information and ideas from **primary and/or secondary sources** accurately and coherently, as appropriate*
- e. *attributes sources of information, as appropriate*
- f. *includes a topic sentence for each body paragraph*
- g. *includes relevant factors and variables that need to be considered*
- h. *includes visual aids to organize and record information on charts, data tables, maps and graphs, as appropriate*
- i. *includes an effective conclusion*

Example: Compose an essay on Alexis de Tocqueville's 1830s observations on American political and social life. Examine other historical documents to determine how accurate the de Tocqueville's analysis was, and how his views of society reflect the United States today.

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Arizona Department of Education – Standards Based Teaching and Learning

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Writing Standard Articulated by Grade Level

Grade 11

Concept 3: Functional

Functional writing provides specific directions or information related to real-world tasks. This includes letters, memos, schedules, directories, signs, manuals, forms, recipes, and technical pieces for specific content areas.

PO 1. Write a work-related document (e.g., application, minutes, memo, cover letter, letter of application, speaker introduction, letter of recommendation, technical manual) that:

- a. presents information purposefully and succinctly to meet the needs of the intended audience
- b. follows a conventional format

Example: Complete a job application form for a part-time job and attach a memorandum outlining the particular skills you have that fit the job description.

(See R11-S3C2)

Concept 4: Persuasive

Persuasive writing is used for the purpose of influencing the reader. The author presents an issue and expresses an opinion in order to convince an audience to agree with the opinion or to take a particular action.

PO 1. Write a persuasive composition (e.g. speech, editorial, letter to the editor, public service announcement) that:

- a. states a position or claim
- b. presents detailed **evidence**, examples, and reasoning to support effective arguments and emotional appeals
- c. attributes sources of information when appropriate
- d. structures ideas
- e. acknowledges and refutes opposing arguments

Example: Write a letter to the editor about a community issue (e.g., teen curfew laws, racial profiling, affirmative action).

(See R11-S3C3)

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Arizona Department of Education – Standards Based Teaching and Learning

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Writing Standard Articulated by Grade Level

Grade 11

Concept 5: Literary Response

Literary response is the writer's reaction to a literary selection. The response includes the writer's interpretation, analysis, opinion, and/or feelings about the piece of literature.

PO 1. Write a literary analysis that:

- a. evaluates the author's use of **literary elements** (i.e., **theme, point of view, characterization, setting, plot**)
- b. interprets different elements of **figurative language** (i.e., **simile, metaphor, personification, hyperbole, symbolism, allusion, and imagery, extended metaphor/conceit**) with emphasis on how the author's use of language evokes readers' emotions
- c. analyzes the way in which the **theme**, or meaning of a selection, represents a view or comment on life, providing textual evidence for the identified theme
- d. explains the writer's use of **irony, contradictions, paradoxes, incongruities, and ambiguities** in a literary selection
- e. analyzes an author's development of time and sequence through the use of complex **literary devices** such as **foreshadowing** and **flashbacks**
- f. explains how meaning is enhanced through various features of poetry, including sound (e.g., **rhythm, repetition, alliteration, consonance, assonance**), structure (e.g., **meter, rhyme scheme**), and graphic elements (e.g., line length, punctuation, word position)

Example: Write an essay about F. Scott Fitzgerald's use of symbolism in *The Great Gatsby*.

(See R11-S2C1)

Concept 6: Research

Research writing is a process in which the writer identifies a topic or question to be answered. The writer locates and evaluates information about the topic or question, and then organizes, summarizes, and synthesizes the information into a finished product.

PO 1. Write a research product that:

- a. incorporates **evidence** in support of a **thesis** or claim
- b. integrates information and ideas from multiple **primary and secondary sources**
- c. makes distinctions between the relative value and significance of specific data, facts, and ideas
- d. includes visual aids to organize and record information on charts, data tables, maps and graphs, as appropriate
- e. integrates direct quotes
- f. uses **internal citations**
- g. includes a works cited, bibliography, or reference page

Example: Choose a post-secondary institution and research its relevance to your future goals.

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Writing Standard Articulated by Grade Level

Grade 12

Strand 1: Writing Process

Research has established the major steps of the writing process. These steps are identified in the five concepts of this strand, each supported with specific performance objectives. While all steps are needed and used by effective writers as they compose text, different skills may be emphasized in individual assignments. These steps may be used recursively as a piece moves toward completion. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress.

Concept 1: Prewriting

Prewriting includes using strategies to generate, plan, and organize ideas for specific purposes.

*PO 1. Generate ideas through a variety of activities (e.g., brainstorming, notes and logs, **graphic organizers**, record of writing ideas and discussion, printed material or other sources).*

PO 2. Determine the purpose (e.g., to entertain, to inform, to communicate, to persuade, to explain) of an intended writing piece.

PO 3. Determine the intended audience of a writing piece.

*PO 4. Establish a **controlling idea** appropriate to the type of writing.*

*PO 5. Use organizational strategies (e.g., outline, chart, table, graph, **Venn Diagram, web, story map, plot pyramid**) to plan writing.*

PO 6. Maintain a record (e.g., lists, journals, folders, notebooks) of writing ideas.

*PO 7. Use **time management strategies**, when appropriate, to produce a writing product within a set time period.*

Concept 2: Drafting

Drafting incorporates prewriting activities to create a first draft containing necessary elements for a specific purpose.

*PO 1. Use a **prewriting plan** to develop the **main idea(s)** with supporting details.*

PO 2. Sequence ideas into a cohesive, meaningful order.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Arizona Academic Content Standards: Writing Standard Articulated by Grade Level

Writing Standard Articulated by Grade Level

Grade 12

Concept 3: Revising
Revising includes evaluating and refining the rough draft for clarity and effectiveness. (Ask: Does this draft say what you want it to say?)
<i>PO 1. Evaluate the draft for use of ideas and content, organization, voice, word choice, and sentence fluency. (See Strand 2)</i>
<i>PO 2. Add details to the draft to more effectively accomplish the purpose.</i>
<i>PO 3. Delete irrelevant and/or redundant information from the draft to more effectively accomplish the purpose.</i>
<i>PO 4. Rearrange words, sentences, and paragraphs in the draft in order to clarify the meaning or to enhance the writing style.</i>
<i>PO 5. Add transitional words and phrases to the draft in order to clarify meaning or enhance the writing style.</i>
<i>PO 6. Use a variety of sentence structures (i.e., simple, compound, complex) to improve sentence fluency in the draft.</i>
<i>PO 7. Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to refine the draft.</i>
<i>PO 8. Use resources and reference materials (e.g., thesaurus, dictionary) to select more effective and precise language.</i>

Concept 4: Editing
Editing includes proofreading and correcting the draft for conventions.
<i>PO 1. Identify punctuation, spelling, and grammar and usage errors in the draft. (See Strand 2)</i>
<i>PO 2. Use resources (e.g., dictionary, word lists, spelling/grammar checkers) to correct conventions.</i>
<i>PO 3. Apply proofreading marks to indicate errors in conventions.</i>
<i>PO 4. Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to edit the draft.</i>

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Writing Standard Articulated by Grade Level

Grade 12

Concept 5: Publishing Publishing involves formatting and presenting a final product for the intended audience.
PO 1. Prepare writing that follows a format appropriate for the purpose (e.g., for display, sharing with others, submitting to a publication).
PO 2. Include such techniques as principles of design (e.g., margins, tabs, spacing, columns) and graphics (e.g., drawings, charts, graphs), when applicable, to enhance the final product.
<i>PO 3. Write legibly.</i>

Strand 2: Writing Elements

This strand focuses on the elements of effective writing. Good writing instruction incorporates multiple performance objectives into an integrated experience of learning for the student. Throughout the process, students should reflect on their own writing skills, set goals, and evaluate their own progress. The order of the concepts and performance objectives is not intended to indicate a progression or hierarchy for writing instruction. Instructional activities may focus on just one concept or many.

Concept 1: Ideas and Content Writing is clear and focused, holding the reader's attention throughout. Main ideas stand out and are developed by strong support and rich details. Purpose is accomplished.
PO 1. Maintain a clear, narrow focus to support the topic.
PO 2. Write with an identifiable purpose and for a specific audience.
PO 3. Provide sufficient, relevant, and carefully selected details for support.
PO 4. Demonstrate a thorough, balanced explanation of the topic.
PO 5. Include ideas and details that show original perspective and insights.

Concept 2: Organization Organization addresses the structure of the writing and integrates the central meaning and patterns that hold the piece together.
<i>PO 1. Use a structure that fits the type of writing (e.g., letter format, narrative, play, essay).</i>
<i>PO 2. Include a strong beginning or introduction that draws in the reader.</i>

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Writing Standard Articulated by Grade Level

Grade 12

<i>PO 3. Place details appropriately to support the main idea.</i>
<i>PO 4. Use effective transitions among all elements (sentences, paragraphs, and ideas).</i>
PO 5. Employ a variety of paragraphing strategies (e.g., topical, chronological, spatial) appropriate to application and purpose.
<i>PO 6. Create an ending that provides a sense of resolution or closure.</i>

Concept 3: Voice Voice will vary according to the type of piece, but should be appropriately formal or casual, distant or personal, depending on the audience and purpose.
<i>PO 1. Show awareness of the audience through word choice, style, and an appropriate connection with, or distance from, the audience.</i>
<i>PO 2. Convey a sense of identity through originality, sincerity, liveliness, or humor appropriate to topic and type of writing.</i>
<i>PO 3. Choose appropriate voice (e.g., formal, informal, academic discourse) for the application.</i>
PO 4. Use engaging and expressive language that shows a commitment to the topic.
PO 5. Use language appropriate to purpose, topic, and audience.

Concept 4: Word Choice Word choice reflects the writer's use of specific words and phrases to convey the intended message and employs a variety of words that are functional and appropriate to the audience and purpose.
<i>PO 1. Use accurate, specific, powerful words and phrases that effectively convey the intended message.</i>
<i>PO 2. Use vocabulary that is original, varied, and natural.</i>
PO 3. Use words that evoke clear images.
PO 4. Use literal and figurative language intentionally when appropriate. (See R09-S2C1-02, R10-S2C1-02, R11-S2C1-02, R12-S2C1-02)
PO 5. Use clichés only when appropriate to purpose.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Writing Standard Articulated by Grade Level

Grade 12

Concept 5: Sentence Fluency
Fluency addresses the rhythm and flow of language. Sentences are strong and varied in structure and length.
PO 1. Use a variety of sentence structures (simple, compound, complex, and compound-complex) and lengths to reinforce relationships among ideas and to enhance the flow of the writing.
PO 2. Show extensive variation in sentence beginnings, lengths, and patterns to enhance the flow of the writing.
PO 3. Demonstrate a flow that is natural and powerful when read aloud.

Concept 6: Conventions	
Conventions addresses the mechanics of writing, including capitalization, punctuation, spelling, grammar and usage, and paragraph breaks.	
PO 1. Use capitals correctly for: <ul style="list-style-type: none"> a. proper nouns: <ul style="list-style-type: none"> • <i>holidays</i> • <i>place/regional names</i> • <i>languages</i> • <i>historical events</i> • <i>organizations</i> • <i>academic courses (e.g., algebra/Algebra I)</i> • <i>product names</i> 	<ul style="list-style-type: none"> b. <i>words used as names (e.g., Grandpa, Aunt Lyn)</i> c. <i>literary titles (book, story, poem, play, song)</i> d. <i>titles</i> e. <i>abbreviations</i> f. proper adjectives (e.g., <i>German shepherd, Chinese restaurant</i>)
PO 2. Use commas to correctly punctuate: <ul style="list-style-type: none"> a. <i>items in a series</i> b. <i>greetings and closings of letters</i> c. <i>introductory words, phrases and clauses</i> d. direct address 	<ul style="list-style-type: none"> e. interruptors f. compound sentences g. appositives h. dialogue
PO 3. Use quotation marks to punctuate: <ul style="list-style-type: none"> a. dialogue b. <i>titles</i> c. <i>exact words from sources</i> 	
PO 4. Use underlining or italics to correctly identify titles and vessels (e.g., ships, spacecrafts, planes, trains).	
PO 5. Use colons to punctuate business letter salutations and sentences introducing lists.	
PO 6. Use semicolons to punctuate compound and compound-complex sentences when appropriate.	

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Writing Standard Articulated by Grade Level

Grade 12

<i>PO 7. Use apostrophes to punctuate:</i> <ul style="list-style-type: none"><i>a. contractions</i><i>b. singular possessives</i><i>c. plural possessives</i>
PO 8. Use hyphens, dashes, parentheses, ellipses, and brackets correctly.
<i>PO 9. Spell words correctly.</i>
PO 10. Use paragraph breaks to reinforce the organizational structure, including dialogue.
PO 11. Demonstrate control of grammar and usage in writing: <ul style="list-style-type: none">a. parts of speechb. verb forms and tensesc. subject/verb agreementd. pronoun/antecedent agreemente. parallel structuref. comparative and superlative degrees of adjectivesg. modifier placementh. homonyms
PO 12. Use appropriate format, according to type of writing, to cite sources (e.g., Chicago, APA, MLA, UPI, any other recognized style manual).

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Arizona Academic Content Standards: Writing Standard Articulated by Grade Level

Writing Standard Articulated by Grade Level

Grade 12

Strand 3: Writing Applications

Writing skills particular to the applications listed here may be taught across the curriculum, although some applications may lend themselves more readily to specific content areas. It is imperative that students write in all content areas in order to increase their communication skills, and ultimately to improve their understanding of content area concepts. When appropriate, other content standards are referenced to show interdisciplinary connections.

Concept 1: Expressive

Expressive writing includes **personal narratives**, stories, poetry, songs, and dramatic pieces. Writing may be based on real or imagined events.

*PO 1. Write in a variety of expressive forms (e.g., poetry, fiction, autobiography, **narrative**, and/or drama) that:*

- a. *use voice and style appropriate to audience and purpose*
- b. *organize ideas in writing to ensure coherence, logical progression, and support*
- c. *employ literary devices (e.g., **irony**, **conceit**, **flashback**, **foreshadowing**, **symbolism**, **allusion**) to enhance style and voice*

Example: After reading from Geoffrey Chaucer's *The Canterbury Tales*, write your own version of a traveler's tale.

Concept 2: Expository

Expository writing includes non-fiction writing that describes, explains, or summarizes ideas and content. The writing supports a **thesis** based on research, observation, and/or experience.

PO 1. Write a multi-paragraph essay (e.g., analysis, deduction/induction, problem/solution, extended definition) that:

- a. *includes background information to set up the **thesis (hypothesis, essential question)**, as appropriate*
- b. *states a **thesis (hypothesis, essential question)** with a narrow focus*
- c. *includes evidence in support of a **thesis (hypothesis, essential question)** in the form of details, facts, examples, or reasons*
- d. *communicates information and ideas from **primary and/or secondary sources** accurately and coherently, as appropriate*
- e. *attributes sources of information as appropriate*
- f. *includes a topic sentence for each body paragraph*
- g. *includes relevant factors and variables that need to be considered*
- h. *includes visual aids to organize and record information on charts, data tables, maps and graphs, as appropriate*
- i. *includes an effective conclusion*

Example: Compose an essay explaining how your school's service learning program has identified and addressed a community problem.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Arizona Academic Content Standards: Writing Standard Articulated by Grade Level

Writing Standard Articulated by Grade Level

Grade 12

Concept 3: Functional

Functional writing provides specific directions or information related to real-world tasks. This includes letters, memos, schedules, directories, signs, manuals, forms, recipes, and technical pieces for specific content areas.

PO 1. Write a work-related document (e.g., resume, application essay) that:

- a. *presents information purposefully and succinctly to meet the needs of the intended audience*
- b. *follows a conventional format*

Example: Write a resume outlining job experience, extra-curricular activities and other skills, formatted for the intended audience.

(See R12-S3C2)

Concept 4: Persuasive

Persuasive writing is used for the purpose of influencing the reader. The author presents an issue and expresses an opinion in order to convince an audience to agree with the opinion or to take a particular action.

PO 1. Write a persuasive composition (e.g. speech, editorial, letter to the editor, public service announcement) that:

- a. *states a position or claim*
- b. *presents detailed **evidence**, examples, and reasoning to support effective arguments and emotional appeals*
- c. *attributes sources of information when appropriate*
- d. *structures ideas*
- e. *acknowledges and refutes opposing arguments*

Example: Write a public service announcement persuading citizens to vote.

(See R12-S3C3)

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Arizona Academic Content Standards: Writing Standard Articulated by Grade Level

Writing Standard Articulated by Grade Level

Grade 12

Concept 5: Literary Response

Literary response is the writer's reaction to a literary selection. The response includes the writer's interpretation, analysis, opinion, and/or feelings about the piece of literature.

PO 1. Write literary analyses that:

- a. *evaluates the author's use of **literary elements** (i.e., **theme, point of view, characterization, setting, plot**)*
- b. *interprets **figurative language** (i.e., **personification, hyperbole, symbolism, allusion, imagery, extended metaphor/conceit, and allegory**) with emphasis upon how the writer uses language to evoke readers' emotions*
- c. *explains how meaning is enhanced through various features of poetry, including sound (e.g., **rhythm, repetition, alliteration, consonance, assonance**), structure (e.g., **meter, rhyme scheme**), graphic elements (e.g., **line length, punctuation, word position**)*
- d. *analyzes a writer's word choice and **imagery** as a means to appeal to the reader's senses and to set the tone, providing evidence from the text to support the analysis,*
- e. *describes the function of dialogue, scene design, **soliloquies, asides**, and/or **character foils** in dramatic literature*
- f. *compares literary texts that express a universal theme, providing textual evidence (e.g., examples, details, quotations) as support for the identified **theme***
- g. *analyzes characteristics of subgenres (e.g., **satire, parody, allegory**) that overlap or cut across the lines of genre classifications such as poetry, novel, drama, short story, essay or editorial*

Example: Write an essay comparing and contrasting the realities of war as presented in "Dulce Et Decorum Est" by Wilfred Owen and *All Quiet on the Western Front* by Erich Maria Remarque.

(See R12-S2C1)

Concept 6: Research

Research writing is a process in which the writer identifies a topic or question to be answered. The writer locates and evaluates information about the topic or question, and then organizes, summarizes, and synthesizes the information into a finished product.

PO 1. Write a research product that:

- a. *incorporates evidence in support of a **thesis** or claim*
- b. *integrates information and ideas from multiple **primary and secondary sources***
- c. *makes distinctions between the relative value and significance of specific data, facts, and ideas*
- d. *includes visual aids to organize and record information on charts, data tables, maps and graphs, as appropriate*
- e. *integrates direct quotes*
- f. *uses **internal citations***
- g. *includes a works cited, bibliography, or reference page*

Example: Write a research report about inventions that were first mentioned in science fiction novels or movies and later became a scientific reality.

Italics denotes a repetition of a performance objective (learned in an earlier grade) that is to be applied to more complex writing activities.

Arizona Academic Content Standards: Writing Standard Articulated by Grade Level

Language Arts 1996
Writing (1996)
Listening and Speaking
Viewing and Presenting

Proficiency (Grades 9-12)

Language Arts Standards Rationale

A Vision for Arizona's Students

Arizona's students must be able to communicate effectively in their schools and communities. The communication skills of reading, writing, listening, speaking, viewing and presenting form the core of language and literacy. The ultimate purpose of the following language arts standards is to ensure that all students be offered the opportunities, the encouragement and the vision to develop the language skills they need to pursue lifelong goals, including finding personal enrichment and participating as informed members of society. The language art standards presented in this document are organized into four areas:

- Reading
- Writing
- Listening and Speaking
- Viewing and Presenting

Reading, writing, listening and speaking are commonly recognized as language skills. Visual communication skills have long been applied in language arts classrooms through the use of media and visual resources. However, with the increase in the availability and variety of media, students are faced with numerous demands for interpreting and creating visual messages. In this document, viewing (interpreting visual messages) and presenting (creating visual messages) are the two aspects of visual communication. Resources available for teaching visual communication range from charts, graphs and photographs to the most sophisticated electronic media.

The interdependency of reading, writing, listening, speaking, viewing and presenting requires that language arts skills be integrated in two ways:

- Within language arts
- Across other content areas

Students use language skills to understand academic subject matter and to enrich their lives. They develop literacy at different rates and in a variety of ways. Consequently, interdependent language arts skills and processes should be taught in a variety of learning situations.

Assessment of language arts skills and processes should be comprehensive, authentic and performance based. Multiple assessment methods should be used to evaluate a student's knowledge base and the application of reading, writing, listening, speaking, viewing and presenting.

Assessment tasks should reflect those experiences encountered in the home, community and workplace. Issues concerning assessment of specific populations pose complex questions with no simple solutions. As programs and assessments are developed, these issues must be resolved to enable all students to meet the standards.

In conclusion, the standards in the language arts framework form the core of every student's ability to function effectively in society. Students will need a wide repertoire of communication strategies and skills to succeed as learners, citizens, workers and fulfilled individuals in the 21st century.

Table 1. Language Arts Standards

***STANDARD 1: Reading* - Removed from this document
See Reading Standard Articulated by Grade Level**

***STANDARD 2: Writing* - 2004-2005: Transition Year;
2005-2006: Implement Writing Standard Articulated by Grade Level**

Students effectively use written language for a variety of purposes and with a variety of audiences.

STANDARD 3. Listening and Speaking

Students effectively listen and speak in situations that serve different purposes and involve a variety of audiences.

STANDARD 4: Viewing and Presenting

Students use a variety of visual media and resources to gather, evaluate and synthesize information and to communicate with others.

STANDARD 2: WRITING

Students effectively use written language for a variety of purposes and with a variety of audiences.

Note: In developing the Proficiency Level concepts, students should use the writing process, including generating topics, drafting, revising ideas and editing, to complete effectively a variety of writing tasks. See W-F1 (foundations level) for the performance objectives.

(Proficiency Grades 9-12)

- **W-P1. Use transitional devices; varied sentence structures; the active voice; parallel structures; supporting details, phrases and clauses; and correct spelling, punctuation, capitalization, grammar and usage to sharpen the focus and clarify the meaning of their writings**
 - PO 1. Use transitions (e.g., conjunctive adverbs, coordinating conjunctions, subordinating conjunctions) where appropriate
 - PO 2. Vary sentence structure (e.g., compound, complex, compound-complex)
 - PO 3. Use active voice as appropriate to purpose (e.g., creative writing, expository writing)
 - PO 4. Use parallel structure appropriately
 - PO 5. Sharpen the focus and clarify the meaning of their writing through the appropriate use of
 - capitalization
 - standard grammar and usage (e.g., subject-verb agreement, pronoun agreement and consistency of verb tense)
 - spelling, with the use of a dictionary/thesaurus (as needed)
 - punctuation (e.g., comma, ellipsis, apostrophe, semicolon, colon)
- **W-P2. Write a persuasive essay (e.g., an editorial, a review, an essay, a critique) that contains effective introductory and summary statements; arranges the arguments effectively; and fully develops the ideas with convincing proof, details, facts, examples and descriptions**
 - PO 1. Write a thesis statement to convey a point of view about a subject
 - PO 2. Develop the point of view with ample and convincing support (e.g., details, facts, reasons, examples and descriptions) appropriate to audience and purpose
 - PO 3. Create an organizational structure that includes an effective beginning, middle and ending
 - PO 4. Use persuasive word choice and sentence structure (e.g., connotation, strong verbs, repetition and parallelism)

- **W-P3. Write an analysis of an author's use of literary elements such as character, setting, theme, plot, figurative language and point of view**

PO 1. Develop a thesis that states a position about the author's use of literary elements
PO 2. Support the thesis with relevant examples from the selection
PO 3. Analyze the author's use of literary elements (e.g., character, setting and theme)
PO 4. Organize the analysis with a clear beginning, middle and ending

- **W-P4. Craft a cohesive research document that develops a logical argument or thesis; contains comprehensive, supporting information from a variety of credible and cited resources; and conforms to a style manual**

PO 1. State a point of view, position or argument about the subject
PO 2. Organize with a beginning that states the thesis, a middle that develops the thesis, and an end
PO 3. Support a point of view, position, or argument, utilizing facts, examples, details, and/or quotes from credible, accurate sources
PO 4. Follow the guidelines of a selected style manual consistently

- **W-P5. Write formal communications, such as a résumé, manuals and letters of application, in appropriate formats, for a definite audience and with a clear purpose**

PO 1. Establish a clear purpose for a specific audience
PO 2. Use a clear and appropriate organizational pattern following a standard format for the assigned communication
PO 3. Include only relevant information
PO 4. Use language with an appropriate degree of formality

- **W-P6. Write a narrative or story that develops complex characters, plot structure, point of view and setting; organizes ideas in meaningful sequence; and includes sensory details and concrete language to advance the story line**

PO 1. Write a first- or third-person narrative or story

- develop a point of view
- present events in a logical order
- develop events that convey a unifying theme or tone
- include sensory details, concrete language and/or dialog
- use literary elements (e.g., plot, setting, character, theme)

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **W-D1. Expand writing experiences by experimenting with language, form and genres (e.g., poetry, screen plays and public policy documents)**
- **W-D2. Reflect the subtleties of language and polished literary style in their writings including the power of imagery and precise word choice, and the use of such literary devices as foreshadowing, flashbacks, metaphors, similes, symbolism and idioms**
- **W-D3. Analyze, synthesize, evaluate and apply principles of formal logic in expository writing tasks**

STANDARD 3: LISTENING AND SPEAKING

Students effectively listen and speak in situations that serve different purposes and involve a variety of audiences.

(Proficiency Grades 9-12)

- **LS-P1. Deliver a polished speech that is organized and well suited to the audience and that uses resource materials to clarify and defend positions**
- **LS-P2. Deliver an impromptu speech that is organized, addresses a particular subject and is tailored to the audience**
- **LS-P3. Deliver oral interpretations of literary or original works**
- **LS-P4. Conduct an interview, taking appropriate notes and summarizing the information learned**
- **LS-P5. Evaluate the effectiveness of informal and formal presentations that use illustrations, statistics, comparisons and analogies**

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **LS-D1. Use clear and concise language when presenting analytical responses to literature, conveying technical information, and explaining complex concepts and procedures**
- **LS-D2. Deliver creative and dramatic interpretations of literary or original works**

- **LS-D3. Communicate information expressively, informatively and analytically through a variety of media to audiences inside or outside of school**
- **LS-D4. Evaluate and improve personal communication skills**

STANDARD 4: VIEWING AND PRESENTING

Students use a variety of visual media and resources to gather, evaluate and synthesize information and to communicate with others.

(Proficiency Grades 9-12)

- **VP-P1. Analyze and evaluate visual media for language, subject matter and visual techniques used to influence attitudes, decision making and cultural perceptions**
- **VP-P2. Plan, organize, develop, produce and evaluate an effective multimedia presentation, using tools such as charts, photographs, maps, tables, posters, transparencies, slides and electronic media**
- **VP-P3. Analyze and evaluate the impact of visual media on the intended audience**

(Distinction – Honors)

Students know and are able to do all of the above and the following:

- **VP-D1. Conduct research to evaluate the impact of language, subject matter and visual techniques used by the media**
- **VP-D2. Expand abilities in developing multimedia presentations**
- **VP-D3. Research ethical issues related to the laws, rules and regulations for the use of media**

LANGUAGE ARTS GLOSSARY

Acknowledge To cite the source of information in a written piece.

Address To speak to; to deal with.

Adequate Sufficient, competent, satisfactory.

Advance To put forward, propose.

Allusion An indirect reference to something assumed to be familiar.

Analytic Noting relationships; reasoning from the interrelations of a subject.

Anticipate To foresee, to realize beforehand.

Appropriate Consistent with accepted standards; suited to an end or purpose.

Cluster A group of the same or similar elements.

Cohesive Consistent, tending to unify.

Complex Composite, intricate, complicated.

Concrete Precise, specific.

Contain To have within, to include, to have as component parts.

Contemporary In existence now; present, current, present-day.

Convey To communicate or make known.

Craft To construct, create.

Create To produce through artistic or imaginative effort.

Creative Original, inventive, innovative.

Credible Worthy of belief because of precision; valid, convincing, true.

Credit To acknowledge work done; to cite.

Effective Producing a desired effect; efficient.

Exclude To reject; to prevent from being included or considered.

Expository Explanatory, interpretive.

Figurative Language Use of figures of speech; symbolic language.

Genre Type or class; classification of literature.

Good Penmanship Readable formation of letters; the art of handwriting.

High Frequency Word A word that appears many more times than others in ordinary reading materials.

Idiomatic Pertaining to expressions of language that do not mean what they literally say.

Interpretive Serving to explain; explanatory.

K-W-L A reading comprehension strategy to determine what a student knows, wants to know and has learned.

List To itemize; to make a list of.

Maintain To support, sustain.

Meaningful Effectively conveying meaning, feeling or mood; important, significant.

Metaphor A figure of speech in which a comparison is implied by analogy, but not stated.

Paraphrase To restate text or passage in another form or words.

Personal Experience First-hand experience.

Perspective View, outlook.

Preserve To keep or maintain intact.

Reflective Characterized by, or disposed to, serious thought; contemplative, deliberative.

Relate To give account of; describe, report.

Relevant Having a bearing on, or connection with, the matter at hand.

Résumé A brief written account of personal, educational and professional qualifications and experience.

Scaffold To build one idea upon another.

Sensory Pertaining to the senses.

Simile A figure of speech in which two essentially unlike things are compared.

Skim To look through reading matter casually.

Symbolism Attributing symbolic meanings or significance to objects, events or relationships.

Traditional Conventional.

Mathematics Standard Articulated
By Grade Level 2003

High School

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 1: Number Sense and Operations

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Number Sense

Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.

- PO 1. Classify real numbers as members of one or more subsets: natural, whole, integers, rational, or irrational numbers.
- PO 2. Identify properties of the real number system: commutative, associative, distributive, identity, inverse, and closure.
- PO 3. Distinguish between finite and infinite sets of numbers.

Concept 2: Numerical Operations

Understand and apply numerical operations and their relationship to one another.

- PO 1. Select the grade-level appropriate operation to solve word problems.
- PO 2. Solve word problems using grade-level appropriate operations and numbers.
- PO 3. Simplify numerical expressions including signed numbers and absolute values.
- PO 4. Apply subscripts to represent ordinal position.
- PO 5. Use grade level-appropriate mathematical terminology.
- PO 6. Compute using scientific notation.
- PO 7. Simplify numerical expressions using the order of operations.

Concept 3: Estimation

Use estimation strategies reasonably and fluently.

- PO 1. Solve grade-level appropriate problems using estimation.
- PO 2. Determine if a solution to a problem is reasonable.
- PO 3. Determine rational approximations of irrational numbers.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 2: Data Analysis, Probability, and Discrete Mathematics

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Data Analysis (Statistics)

Understand and apply data collection, organization and representation to analyze and sort data.

- PO 1. Formulate questions to collect data in contextual situations.
- PO 2. Organize collected data into an appropriate graphical representation.
- PO 3. Display data as lists, tables, matrices, and plots.
- PO 4. Construct equivalent displays of the same data.
- PO 5. Identify graphic misrepresentations and distortions of sets of data.
- PO 6. Identify which of the measures of central tendency is most appropriate in a given situation.
- PO 7. Make reasonable predictions based upon linear patterns in data sets or scatter plots.
- PO 8. Make reasonable predictions for a set of data, based on patterns.
- PO 9. Draw inferences from charts, tables, graphs, plots, or data sets.
- PO 10. Apply the concepts of mean, median, mode, range, and quartiles to summarize data sets.
- PO 11. Evaluate the reasonableness of conclusions drawn from data analysis.
- PO 12. Recognize and explain the impact of interpreting data (making inferences or drawing conclusions) from a biased sample.
- PO 13. Draw a line of best fit for a scatter plot.
- PO 14. Determine whether displayed data has positive, negative, or no correlation.
- PO 15. Identify a normal distribution.
- PO 16. Identify differences between sampling and census.
- PO 17. Identify differences between biased and unbiased samples.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 2: Probability

Understand and apply the basic concepts of probability.

- PO 1. Find the probability that a specific event will occur, with or without replacement.
- PO 2. Determine simple probabilities related to geometric figures.
- PO 3. Predict the outcome of a grade-level appropriate probability experiment.
- PO 4. Record the data from performing a grade-level appropriate probability experiment.
- PO 5. Compare the outcome of an experiment to predictions made prior to performing the experiment.
- PO 6. Distinguish between independent and dependent events.
- PO 7. Compare the results of two repetitions of the same grade-level appropriate probability experiment.

Concept 3: Discrete Mathematics – Systematic Listing and Counting

Understand and demonstrate the systematic listing and counting of possible outcomes.

- PO 1. Determine the number of possible outcomes for a contextual event using a chart, a tree diagram, or the counting principle.
- PO 2. Determine when to use combinations versus permutations in counting objects.
- PO 3. Use combinations or permutations to solve contextual problems.

Concept 4: Vertex-Edge Graphs

Understand and apply vertex-edge graphs.

(Grades K-8)

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 3: Patterns, Algebra, and Functions

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Patterns

Identify patterns and apply pattern recognition to reason mathematically.

- PO 1. Communicate a grade-level appropriate iterative or recursive pattern, using symbols or numbers.
- PO 2. Find the n^{th} term of an iterative or recursive pattern.
- PO 3. Evaluate problems using basic recursion formulas.

Concept 2: Functions and Relationships

Describe and model functions and their relationships.

- PO 1. Determine if a relationship is a function, given a graph, table, or set of ordered pairs.
- PO 2. Describe a contextual situation that is depicted by a given graph.
- PO 3. Identify a graph that models a given real-world situation.
- PO 4. Sketch a graph that models a given contextual situation.
- PO 5. Determine domain and range for a function.
- PO 6. Determine the solution to a contextual maximum/minimum problem, given the graphical representation.
- PO 7. Express the relationship between two variables using tables/matrices, equations, or graphs.
- PO 8. Interpret the relationship between data suggested by tables/matrices, equations, or graphs.
- PO 9. Determine from two linear equations whether the lines are parallel, perpendicular, coincident, or intersecting but not perpendicular.

Concept 3: Algebraic Representations

Represent and analyze mathematical situations and structures using algebraic representations.

- PO 1. Evaluate algebraic expressions, including absolute value and square roots.
- PO 2. Simplify algebraic expressions.
- PO 3. Multiply and divide monomial expressions with integral exponents.
- PO 4. Translate a written expression or sentence into a mathematical expression or sentence.
- PO 5. Translate a sentence written in context into an algebraic equation involving multiple operations.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

- PO 6. Write a linear equation for a table of values.
- PO 7. Write a linear algebraic sentence that represents a data set that models a contextual situation.
- PO 8. Solve linear (first degree) equations in one variable (may include absolute value).
- PO 9. Solve linear inequalities in one variable.
- PO 10. Write an equation of the line given: two points on the line, the slope and a point on the line, or the graph of the line.
- PO 11. Solve an algebraic proportion.
- PO 12. Solve systems of linear equations in two variables (integral coefficients and rational solutions).
- PO 13. Add, subtract, and perform scalar multiplication with matrices.
- PO 14. Calculate powers and roots of real numbers, both rational and irrational, using technology when appropriate.
- PO 15. Simplify square roots and cube roots with monomial radicands (including those with variables) that are perfect squares or perfect cubes.
- PO 16. Solve square root radical equations involving only one radical.
- PO 17. Solve quadratic equations.
- PO 18. Identify the sine, cosine, and tangent ratios of the acute angles of a right triangle.

Concept 4: Analysis of Change

Analyze change in a variable over time and in various contexts.

- PO 1. Determine slope, x-, and y-intercepts of a linear equation.
- PO 2. Solve formulas for specified variables.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 4: Geometry and Measurement

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Geometric Properties

Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.

- PO 1. Identify the attributes of special triangles (isosceles, equilateral, right).
- PO 2. Identify the hierarchy of quadrilaterals.
- PO 3. Make a net to represent a 3-dimensional object.
- PO 4. Make a 3-dimensional model from a net.
- PO 5. Draw 2-dimensional and 3-dimensional figures with appropriate labels.
- PO 6. Solve problems related to complementary, supplementary, or congruent angle concepts.
- PO 7. Solve problems by applying the relationship between circles, angles, and intercepted arcs.
- PO 8. Solve problems by applying the relationship between radii, diameters, chords, tangents, or secants.
- PO 9. Solve problems using the triangle inequality property.
- PO 10. Solve problems using special case right triangles.
- PO 11. Determine when triangles are congruent by applying SSS, ASA, AAS, or SAS.
- PO 12. Determine when triangles are similar by applying SAS, SSS, or AA similarity postulates.
- PO 13. Construct a triangle congruent to a given triangle.
- PO 14. Solve contextual situations using angle and side length relationships.

Concept 2: Transformation of Shapes

Apply spatial reasoning to create transformations and use symmetry to analyze mathematical situations.

- PO 1. Sketch the planar figure that is the result of two or more transformations.
- PO 2. Identify the properties of the planar figure that is the result of two or more transformations.
- PO 3. Determine the new coordinates of a point when a single transformation is performed on a planar geometric figure.
- PO 4. Determine whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

- PO 5. Classify transformations based on whether they produce congruent or similar figures.
- PO 6. Determine the effects of a single transformation on linear or area measurements of a planar geometric figure.

Concept 3: Coordinate Geometry

Specify and describe spatial relationships using coordinate geometry and other representational systems.

- PO 1. Graph a quadratic equation with lead coefficient equal to one.
- PO 2. Graph a linear equation in two variables.
- PO 3. Graph a linear inequality in two variables.
- PO 4. Determine the solution to a system of equations in two variables from a given graph.
- PO 5. Determine the midpoint between two points in a coordinate system.
- PO 6. Determine changes in the graph of a linear function when constants and coefficients in its equation are varied.
- PO 7. Determine the distance between two points in the coordinate system.

Concept 4: Measurement - Units of Measure - Geometric Objects

Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.

- PO 1. Calculate the area of geometric shapes composed of two or more geometric figures.
- PO 2. Calculate the volumes of 3-dimensional geometric figures.
- PO 3. Calculate the surface areas of 3-dimensional geometric figures.
- PO 4. Compare perimeter, area, or volume of figures when dimensions are changed.
- PO 5. Find the length of a circular arc.
- PO 6. Find the area of a sector of a circle.
- PO 7. Solve for missing measures in a pyramid (i.e., slant height, height).
- PO 8. Find the sum of the interior and exterior angles of a polygon.
- PO 9. Solve scale factor problems using ratios and proportions.
- PO 10. Solve applied problems using similar triangles.

MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 5: Structure and Logic

Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.

Concept 1: Algorithms and Algorithmic Thinking

Use reasoning to solve mathematical problems in contextual situations.

- PO 1. Determine whether a given procedure for simplifying an expression is valid.
- PO 2. Determine whether a given procedure for solving an equation is valid.
- PO 3. Determine whether a given procedure for solving a linear inequality is valid.
- PO 4. Select an algorithm that explains a particular mathematical process.
- PO 5. Determine the purpose of a simple mathematical algorithm.
- PO 6. Determine whether given simple mathematical algorithms are equivalent.

Concept 2: Logic, Reasoning, Arguments, and Mathematical Proof

Evaluate situations, select problem-solving strategies, draw logical conclusions, develop and describe solutions and recognize their applications.

- PO 1. Draw a simple valid conclusion from a given *if...then* statement and a minor premise.
- PO 2. List related *if... then* statements in logical order.
- PO 3. Write an appropriate conjecture given a certain set of circumstances.
- PO 4. Analyze assertions related to a contextual situation by using principles of logic.
- PO 5. Identify a valid conjecture using inductive reasoning.
- PO 6. Distinguish valid arguments from invalid arguments.
- PO 7. Create inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship.
- PO 8. Critique inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship.
- PO 9. Identify a counterexample for a given conjecture.
- PO 10. Construct a counterexample to show that a given conjecture is false.
- PO 11. State the inverse, converse, or contrapositive of a given statement.
- PO 12. Determine if the inverse, converse, or contrapositive of a given statement is true or false.
- PO 13. Construct a simple formal or informal deductive proof.
- PO 14. Verify characteristics of a given geometric figure using coordinate formulas such as distance, mid-point, and slope to confirm parallelism, perpendicularity, and congruency.

Science Standard Articulated
by Grade Level 2004

High School

SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

The Arizona high school science standard was designed to support the instruction and assessment of students. Science instruction should involve students actively using scientific processes to understand course content and make connections to real life and related areas of study. The goal in the development of the standard was to assure that the six strands and five unifying concepts are interwoven into a fabric of science that represents the true nature of science. Students have the opportunity to develop both the skills and content knowledge necessary to be scientifically literate members of the community.

Strands 1, 2, and 3 (Inquiry Process, History and Nature of Science, and Science in Personal and Social Perspective) contain the processes and connections desired of Arizona students and must, therefore, be reflected in all science courses. These strands are designed to be explicitly taught *and embedded within* each of the content Strands 4, 5, and 6, and are not intended to be taught in isolation. The processes, skills, and content of the first three strands are designed to “umbrella” and complement the content of Life Science, Physical Science, and Earth and Space Science.

At the high school level, Strands 4, 5, and 6 (Life Science, Physical Science, and Earth and Space Science) contain content area knowledge and skills that are, by nature, course specific. These strands were written to provide frameworks for complete courses in Life, Physics, Chemistry, and Earth and Space sciences.

The high school science Arizona Instrument to Measure Standards (AIMS) will be administered as an end of course test. For each course tested, all performance objectives in Strands 1, 2 and 3 may be included on the assessment. Depending on the course tested, performance objectives from Strand 4, 5, or 6, will be measured. For example, an end of course AIMS for high school biology could include performance objectives from Strands 1, 2, 3, and 4. A blueprint of the Science AIMS will be available following test development.

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Arizona Department of Education – Standards Based Teaching and Learning

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 1: Inquiry Process

Inquiry Process establishes the basis for students' learning in science. Students use scientific processes: questioning, planning and conducting investigations, using appropriate tools and techniques to gather data, thinking critically and logically about relationships between evidence and explanations, and communicating results.

Concept 1: Observations, Questions, and Hypotheses

Formulate predictions, questions, or hypotheses based on observations. Evaluate appropriate resources.

- PO 1. Evaluate scientific information for relevance to a given problem. (See R09-S3C1, R10-S3C1, R11-S3C1, and R12-S3C1)
- PO 2. Develop questions from observations that transition into testable hypotheses.
- PO 3. Formulate a testable hypothesis.
- PO 4. Predict the outcome of an investigation based on prior evidence, probability, and/or modeling (not guessing or inferring).

Concept 2: Scientific Testing (Investigating and Modeling)

Design and conduct controlled investigations.

- PO 1. Demonstrate safe and ethical procedures (e.g., use and care of technology, materials, organisms) and behavior in all science inquiry.
- PO 2. Identify the resources needed to conduct an investigation.
- PO 3. Design an appropriate protocol (written plan of action) for testing a hypothesis:
- Identify dependent and independent variables in a controlled investigation.
 - Determine an appropriate method for data collection (e.g., using balances, thermometers, microscopes, spectrophotometer, using qualitative changes).
 - Determine an appropriate method for recording data (e.g., notes, sketches, photographs, videos, journals (logs), charts, computers/calculators).
- PO 4. Conduct a scientific investigation that is based on a research design.
- PO 5. Record observations, notes, sketches, questions, and ideas using tools such as journals, charts, graphs, and computers.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 3: Analysis, Conclusions, and Refinements

Evaluate experimental design, analyze data to explain results and propose further investigations. Design models.

PO 1. Interpret data that show a variety of possible relationships between variables, including:

- positive relationship
- negative relationship
- no relationship

PO 2. Evaluate whether investigational data support or do not support the proposed hypothesis.

PO 3. Critique reports of scientific studies (e.g., published papers, student reports).

PO 4. Evaluate the design of an investigation to identify possible sources of procedural error, including:

- sample size
- trials
- controls
- analyses

PO 5. Design models (conceptual or physical) of the following to represent "real world" scenarios:

- carbon cycle
- water cycle
- phase change
- collisions

PO 6. Use descriptive statistics to analyze data, including:

- mean
- frequency
- range

(See MHS-S2C1-10)

PO 7. Propose further investigations based on the findings of a conducted investigation.

Concept 4: Communication

Communicate results of investigations.

PO 1. For a specific investigation, choose an appropriate method for communicating the results.
(See W09-S3C2-01 and W10-S3C3-01)

PO 2. Produce graphs that communicate data. (See MHS-S2C1-02)

PO 3. Communicate results clearly and logically.

PO 4. Support conclusions with logical scientific arguments.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 2: History and Nature of Science

Scientific investigation grows from the contributions of many people. History and Nature of Science emphasizes the importance of the inclusion of historical perspectives and the advances that each new development brings to technology and human knowledge. This strand focuses on the human aspects of science and the role that scientists play in the development of various cultures.

Concept 1: History of Science as a Human Endeavor

Identify individual, cultural, and technological contributions to scientific knowledge.

PO 1. Describe how human curiosity and needs have influenced science, impacting the quality of life worldwide.

PO 2. Describe how diverse people and/or cultures, past and present, have made important contributions to scientific innovations.

PO 3. Analyze how specific changes in science have affected society.

PO 4. Analyze how specific cultural and/or societal issues promote or hinder scientific advancements.

Concept 2: Nature of Scientific Knowledge

Understand how science is a process for generating knowledge.

PO 1. Specify the requirements of a valid, scientific explanation (theory), including that it be:

- logical
- subject to peer review
- public
- respectful of rules of evidence

PO 2. Explain the process by which accepted ideas are challenged or extended by scientific innovation.

PO 3. Distinguish between pure and applied science.

PO 4. Describe how scientists continue to investigate and critically analyze aspects of theories.

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HIGH SCHOOL

Strand 3: Science in Personal and Social Perspectives

Science in Personal and Social Perspectives emphasizes developing the ability to design a solution to a problem, to understand the relationship between science and technology, and the ways people are involved in both. Students understand the impact of science and technology on human activity and the environment. This strand affords students the opportunity to understand their place in the world – as living creatures, consumers, decision makers, problem solvers, managers, and planners.

Concept 1: Changes in Environments

Describe the interactions between human populations, natural hazards, and the environment.

PO 1. Evaluate how the processes of natural ecosystems affect, and are affected by, humans.

PO 2. Describe the environmental effects of the following natural and/or human-caused hazards:

- flooding
- drought
- earthquakes
- fires
- pollution
- extreme weather

PO 3. Assess how human activities (e.g., clear cutting, water management, tree thinning) can affect the potential for hazards.

PO 4. Evaluate the following factors that affect the quality of the environment:

- urban development
- smoke
- volcanic dust

PO 5. Evaluate the effectiveness of conservation practices and preservation techniques on environmental quality and biodiversity.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 2: Science and Technology in Society

Develop viable solutions to a need or problem.

PO 1. Analyze the costs, benefits, and risks of various ways of dealing with the following needs or problems:

- various forms of alternative energy
- storage of nuclear waste
- abandoned mines
- greenhouse gases
- hazardous wastes

PO 2. Recognize the importance of basing arguments on a thorough understanding of the core concepts and principles of science and technology.

PO 3. Support a position on a science or technology issue.

PO 4. Analyze the use of renewable and nonrenewable resources in Arizona:

- water
- land
- soil
- minerals
- air

PO 5. Evaluate methods used to manage natural resources (e.g., reintroduction of wildlife, fire ecology).

Concept 3: Human Population Characteristics

Analyze factors that affect human populations.

PO 1. Analyze social factors that limit the growth of a human population, including:

- affluence
- education
- access to health care
- cultural influences

PO 2. Describe biotic (living) and abiotic (nonliving) factors that affect human populations.

PO 3. Predict the effect of a change in a specific factor on a human population.

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HIGH SCHOOL

Strand 4: Life Science

Life Science expands students' biological understanding of life by focusing on the characteristics of living things, the diversity of life, and how organisms and populations change over time in terms of biological adaptation and genetics. This understanding includes the relationship of structures to their functions and life cycles, interrelationships of matter and energy in living organisms, and the interactions of living organisms with their environment.

Concept 1: The Cell

Understand the role of the cell and cellular processes.

PO 1. Describe the role of energy in cellular growth, development, and repair.

PO 2. Compare the form and function of prokaryotic and eukaryotic cells and their cellular components.

PO 3. Explain the importance of water to cells.

PO 4. Analyze mechanisms of transport of materials (e.g., water, ions, macromolecules) into and out of cells:

- passive transport
- active transport

PO 5. Describe the purposes and processes of cellular reproduction.

Concept 2: Molecular Basis of Heredity

Understand the molecular basis of heredity and resulting genetic diversity.

PO 1. Analyze the relationships among nucleic acids (DNA, RNA), genes, and chromosomes.

PO 2. Describe the molecular basis of heredity, in viruses and living things, including DNA replication and protein synthesis.

PO 3. Explain how genotypic variation occurs and results in phenotypic diversity.

PO 4. Describe how meiosis and fertilization maintain genetic variation.

Concept 3: Interdependence of Organisms

Analyze the relationships among various organisms and their environment.

PO 1. Identify the relationships among organisms within populations, communities, ecosystems, and biomes.

PO 2. Describe how organisms are influenced by a particular combination of biotic (living) and abiotic (nonliving) factors in an environment.

PO 3. Assess how the size and the rate of growth of a population are determined by birth rate, death rate, immigration, emigration, and carrying capacity of the environment.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 4: Biological Evolution

Understand the scientific principles and processes involved in biological evolution.

- PO 1. Identify the following components of natural selection, which can lead to speciation:
- potential for a species to increase its numbers
 - genetic variability and inheritance of offspring due to mutation and recombination of genes
 - finite supply of resources required for life
 - selection by the environment of those offspring better able to survive and produce offspring
- PO 2. Explain how genotypic and phenotypic variation can result in adaptations that influence an organism's success in an environment.
- PO 3. Describe how the continuing operation of natural selection underlies a population's ability to adapt to changes in the environment and leads to biodiversity and the origin of new species.
- PO 4. Predict how a change in an environmental factor (e.g., rainfall, habitat loss, non-native species) can affect the number and diversity of species in an ecosystem.
- PO 5. Analyze how patterns in the fossil record, nuclear chemistry, geology, molecular biology, and geographical distribution give support to the theory of organic evolution through natural selection over billions of years and the resulting present day biodiversity.
- PO 6. Analyze, using a biological classification system (i.e., cladistics, phylogeny, morphology, DNA analysis), the degree of relatedness among various species.

Concept 5: Matter, Energy, and Organization in Living Systems (Including Human Systems)

Understand the organization of living systems, and the role of energy within those systems.

- PO 1. Compare the processes of photosynthesis and cellular respiration in terms of energy flow, reactants, and products.
- PO 2. Describe the role of organic and inorganic chemicals (e.g., carbohydrates, proteins, lipids, nucleic acids, water, ATP) important to living things.
- PO 3. Diagram the following biogeochemical cycles in an ecosystem:
- water
 - carbon
 - nitrogen
- PO 4. Diagram the energy flow in an ecosystem through a food chain.
- PO 5. Describe the levels of organization of living things from cells, through tissues, organs, organ systems, organisms, populations, and communities to ecosystems.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 5: Physical Science

Physical Science affords students the opportunity to increase their understanding of the characteristics of objects and materials they encounter daily. Students gain an understanding of the nature of matter and energy, including their forms, the changes they undergo, and their interactions. By studying objects and the forces that act upon them, students develop an understanding of the fundamental laws of motion, knowledge of the various ways energy is stored in a system, and the processes by which energy is transferred between systems and surroundings.

Concept 1: Structure and Properties of Matter

Understand physical, chemical, and atomic properties of matter.

- PO 1. Describe substances based on their physical properties.
- PO 2. Describe substances based on their chemical properties.
- PO 3. Predict properties of elements and compounds using trends of the periodic table (e.g., metals, non-metals, bonding – ionic/covalent).
- PO 4. Separate mixtures of substances based on their physical properties.
- PO 5. Describe the properties of electric charge and the conservation of electric charge.
- PO 6. Describe the following features and components of the atom:
- protons
 - neutrons
 - electrons
 - mass
 - number and type of particles
 - structure
 - organization
- PO 7. Describe the historical development of models of the atom.
- PO 8. Explain the details of atomic structure (e.g., electron configuration, energy levels, isotopes).

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 2: Motions and Forces

Analyze relationships between forces and motion.

- PO 1. Determine the rate of change of a quantity (e.g., rate of erosion, rate of reaction, rate of growth, velocity).
- PO 2. Analyze the relationships among position, velocity, acceleration, and time:
- graphically
 - mathematically
- PO 3. Explain how Newton's 1st Law applies to objects at rest or moving at constant velocity.
- PO 4. Using Newton's 2nd Law of Motion, analyze the relationships among the net force acting on a body, the mass of the body, and the resulting acceleration:
- graphically
 - mathematically
- PO 5. Use Newton's 3rd Law to explain forces as interactions between bodies (e.g., a table pushing up on a vase that is pushing down on it; an athlete pushing on a basketball as the ball pushes back on her).
- PO 6. Analyze the two-dimensional motion of objects by using vectors and their components.
- PO 7. Give an example that shows the independence of the horizontal and vertical components of projectile motion.
- PO 8. Analyze the general relationships among force, acceleration, and motion for an object undergoing uniform circular motion.
- PO 9. Represent the force conditions required to maintain static equilibrium.
- PO 10. Describe the nature and magnitude of frictional forces.
- PO 11. Using the Law of Universal Gravitation, predict how the gravitational force will change when the distance between two masses changes or the mass of one of them changes.
- PO 12. Using Coulomb's Law, predict how the electrical force will change when the distance between two point charges changes or the charge of one of them changes.
- PO 13. Analyze the impulse required to produce a change in momentum.
- PO 14. Quantify interactions between objects to show that the total momentum is conserved in both collision and recoil situations.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 3: Conservation of Energy and Increase in Disorder

Understand ways that energy is conserved, stored, and transferred.

PO 1. Describe the following ways in which energy is stored in a system:

- mechanical
- electrical
- chemical
- nuclear

PO 2. Describe various ways in which energy is transferred from one system to another (e.g., mechanical contact, thermal conduction, electromagnetic radiation.)

PO 3. Recognize that energy is conserved in a closed system.

PO 4. Calculate quantitative relationships associated with the conservation of energy.

PO 5. Analyze the relationship between energy transfer and disorder in the universe (2nd Law of Thermodynamics).

PO 6. Distinguish between heat and temperature.

PO 7. Explain how molecular motion is related to temperature and phase changes.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 4: Chemical Reactions

Investigate relationships between reactants and products in chemical reactions.

- PO 1. Apply the law of conservation of matter to changes in a system.
- PO 2. Identify the indicators of chemical change, including formation of a precipitate, evolution of a gas, color change, absorption or release of heat energy.
- PO 3. Represent a chemical reaction by using a balanced equation.
- PO 4. Distinguish among the types of bonds (i.e., ionic, covalent, metallic, hydrogen bonding).
- PO 5. Describe the mole concept and its relationship to Avogadro's number.
- PO 6. Solve problems involving such quantities as moles, mass, molecules, volume of a gas, and molarity using the mole concept and Avogadro's number.
- PO 7. Predict the properties (e.g., melting point, boiling point, conductivity) of substances based upon bond type.
- PO 8. Quantify the relationships between reactants and products in chemical reactions (e.g., stoichiometry, equilibrium, energy transfers).
- PO 9. Predict the products of a chemical reaction using types of reactions (e.g., synthesis, decomposition, replacement, combustion).
- PO 10. Explain the energy transfers within chemical reactions using the law of conservation of energy.
- PO 11. Predict the effect of various factors (e.g., temperature, concentration, pressure, catalyst) on the equilibrium state and on the rates of chemical reaction.
- PO 12. Compare the nature, behavior, concentration, and strengths of acids and bases.
- PO 13. Determine the transfer of electrons in oxidation/reduction reactions.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 5: Interactions of Energy and Matter

Understand the interactions of energy and matter.

PO 1. Describe various ways in which matter and energy interact (e.g., photosynthesis, phase change).

PO 2. Describe the following characteristics of waves:

- wavelength
- frequency
- period
- amplitude

PO 3. Quantify the relationships among the frequency, wavelength, and the speed of light.

PO 4. Describe the basic assumptions of kinetic molecular theory.

PO 5. Apply kinetic molecular theory to the behavior of matter (e.g., gas laws).

PO 6. Analyze calorimetric measurements in simple systems and the energy involved in changes of state.

PO 7. Explain the relationship between the wavelength of light absorbed or released by an atom or molecule and the transfer of a discrete amount of energy.

PO 8. Describe the relationship among electric potential, current, and resistance in an ohmic system.

PO 9. Quantify the relationships among electric potential, current, and resistance in an ohmic system.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Strand 6: Earth and Space Science

Earth and Space Science provides the foundation for students to develop an understanding of the Earth, its history, composition, and formative processes, and an understanding of the solar system and the universe. Students study the regularities of the interrelated systems of the natural world. In doing so, they develop understandings of the basic laws, theories, and models that explain the world (NSES, 1995). By studying the Earth from both a historical and current time frame, students can make informed decisions about issues affecting the planet on which they live.

Concept 1: Geochemical Cycles

Analyze the interactions between the Earth's structures, atmosphere, and geochemical cycles.

- PO 1. Identify ways materials are cycled within the Earth system (i.e., carbon cycle, water cycle, rock cycle).
- PO 2. Demonstrate how dynamic processes such as weathering, erosion, sedimentation, metamorphism, and orogenesis relate to redistribution of materials within the Earth system.
- PO 3. Explain how the rock cycle is related to plate tectonics.
- PO 4. Demonstrate how the hydrosphere links the biosphere, lithosphere, cryosphere, and atmosphere.
- PO 5. Describe factors that impact current and future water quantity and quality including surface, ground, and local water issues.
- PO 6. Analyze methods of reclamation and conservation of water.
- PO 7. Explain how the geochemical processes are responsible for the concentration of economically valuable minerals and ores in Arizona and worldwide.

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SCIENCE STANDARD ARTICULATED BY GRADE LEVEL

HIGH SCHOOL

Concept 2: Energy in the Earth System (Both Internal and External)

Understand the relationships between the Earth's land masses, oceans, and atmosphere.

PO 1. Describe the flow of energy to and from the Earth.

PO 2. Explain the mechanisms of heat transfer (convection, conduction, radiation) among the atmosphere, land masses, and oceans.

PO 3. Distinguish between weather and climate.

Internal Energy:

PO 4. Demonstrate the relationship between the Earth's internal convective heat flow and plate tectonics.

PO 5. Demonstrate the relationships among earthquakes, volcanoes, mountain ranges, mid-oceanic ridges, deep sea trenches, and tectonic plates.

PO 6. Distinguish among seismic S, P, and surface waves.

PO 7. Analyze the seismic evidence (S and P waves) used to determine the structure of the Earth.

PO 8. Describe how radioactive decay maintains the Earth's internal temperature.

External Energy:

PO 9. Explain the effect of heat transfer on climate and weather.

PO 10. Demonstrate the effect of the Earth's rotation (i.e., Coriolis effect) on the movement of water and air.

PO 11. Describe the origin, life cycle, and behavior of weather systems (i.e., air mass, front, high and low systems, pressure gradients).

PO 12. Describe the conditions that cause severe weather (e.g., hurricanes, tornadoes, thunderstorms).

PO 13. Propose appropriate safety measures that can be taken in preparation for severe weather.

PO 14. Analyze how weather is influenced by both natural and artificial Earth features (e.g., mountain ranges, bodies of water, cities, air pollution).

PO 15. List the factors that determine climate (e.g., altitude, latitude, water bodies, precipitation, prevailing winds, topography).

PO 16. Explain the causes and/or effects of climate changes over long periods of time (e.g., glaciation, desertification, solar activity, greenhouse effect).

PO 17. Investigate the effects of acid rain, smoke, volcanic dust, urban development, and greenhouse gases, on climate change over various periods of time.

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HIGH SCHOOL

Concept 3: Origin and Evolution of the Earth System

Analyze the factors used to explain the history and evolution of the Earth.

Earth Origin/System:

- PO 1. Describe the scientific theory of the origin of the solar system (solar nebular hypothesis).
- PO 2. Describe the characteristics, location, and motions of the various kinds of objects in our solar system, including the Sun, planets, satellites, comets, meteors, and asteroids.
- PO 3. Explain the phases of the Moon, eclipses (lunar and solar), and the interaction of the Sun, Moon, and Earth (tidal effect).

Earth History/Evolution:

- PO 4. Interpret a geologic time scale.
- PO 5. Distinguish between relative and absolute geologic dating techniques.
- PO 6. Investigate scientific theories of how life originated on Earth (high temperature, low oxygen, clay catalyst model).
- PO 7. Describe how life on Earth has influenced the evolution of the Earth's systems.
- PO 8. Sequence major events in the Earth's evolution (e.g., mass extinctions, glacial episodes) using relative and absolute dating data.
- PO 9. Analyze patterns in the fossil record related to the theory of organic evolution.

Concept 4: Origin and Evolution of the Universe

Analyze the factors used to explain the origin and evolution of the universe.

- PO 1. Describe the Big Bang Theory as an explanation for the origin of the universe.
- PO 2. Describe the fusion process that takes place in stars.
- PO 3. Analyze the evolution of various types of stars using the Hertzsprung-Russell (HR) diagram.
- PO 4. Compare the evolution (life cycles) of stars of different masses (low and high mass).
- PO 5. Explain the formation of the light elements in stars and the heavier elements (what astronomers call "metals") in supernova explosions.
- PO 6. Explain the evolution and life cycles of galaxies.

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Social Studies Standards 2000

Proficiency (Grades 9-12)

Social Studies Standards Rationale

To maintain the Union that supports our freedoms, citizens must rely on the knowledge, skills, and character of its citizens and those they elect to public office. Critical to the preservation and improvement of America's republican form of government is the study of America's founding principles, namely the principles as detailed in the United States Constitution, the Declaration of Independence, and in *The Federalist Papers*. The standards include study of the rich and diverse contributions people of many backgrounds have made to American life and institutions, and at the same time, emphasize our shared heritage as citizens and residents of the United States. They require that students acquire both core knowledge and a firm grasp of reasoning and practice in inquiry and research. Students must learn how to frame and test hypotheses, distinguish logical from illogical reasoning, frame reasoned options and arguments, and grasp reflective thinking and evaluation. The standards present the academic content and skills in the four interrelated disciplines of history, geography, civics/government, and economics that are essential to an understanding of human experience, past and present.

History

The study of history is essential in developing citizens who understand contemporary issues with a depth and wisdom drawn from the experience of the past. Through the study of history, which integrates the humanities (such as art and literature) and the social sciences (political science, economics, and geography), students will better understand their own society as well as others. Because most United States institutions and ideals trace their origins through Europe, the study of Western civilizations is a central feature of the standards, although students are also expected to learn about the significant contributions of other non-Western civilizations. Analyzing patterns and relationships within and among world cultures such as economic competition and interdependence, age-old ethnic enmities, and political and military alliances, helps learners carefully examine policy alternatives that have both national and worldwide implications. The deep study of history is further informed and enlivened by considering current events and issues. Important as well, students will develop understanding of chronological thinking, the connection between causes and effects, and between continuity and change. They will see how people in other times and places have grappled with the fundamental questions of truth, justice, and personal responsibility, understand that ideas have real consequences, and realize that events are shaped both by ideas and the actions of individuals.

Civics/Government

The goal of the civics standards is to develop in all students the requisite knowledge and skills for informed, responsible participation in public life; to ensure, through instruction, that students understand the essentials, sources, and history of the constitutions of the United States and Arizona, American institutions and ideals (ARS 15-710). Through these standards, students will understand the foundations, principles, and institutional practices of the United States as a representative democracy and constitutional republic. They will be aware of their rights as citizens and residents of the United States. They will understand the importance of each person

as an individual, the importance of respect for the human and civil rights of all people, and our shared heritage as citizens and residents of the United States. The civics standards also reflect the need to help students develop a basic understanding of politics and government and to practice the skills of good citizenship. Students should be able to obtain, understand, and evaluate information relating to the performance of public officials. Citizenship skills are also required for competent participation in the political process. These include the capacity to influence policies and decisions by working with others, clearly articulating interests and making them known to key decision and policy makers, building coalitions, negotiating, compromising, seeking consensus, and managing conflicts.

Geography

The goal of the geography standards is to provide an understanding of: 1) the human and physical characteristics of the Earth's places and regions, 2) how people of different cultural backgrounds interact with their environment, and 3) how the United States and the student's home state and community are affected by conditions and events in near and distant places. By learning to think spatially, students of geography will learn to analyze locations, places, and their myriad relationships. They will also have a framework to study local, regional, national, and global issues that concern them and understand their place in society. The essential skills of asking geographic questions; acquiring, presenting, and analyzing geographic information; and developing and testing geographic generalizations are central to the standards. The geographic reasoning that is represented is a way of studying human and natural features within a spatial perspective. Through geographic reasoning, students will understand the arrangement and interactions of human and physical systems on the surface of the Earth. As these patterns have changed over time and are important to governments and economies, geographic reasoning will help with students' understanding of history, civics, and economics.

Economics

The goal of the economics standards is to ensure that students understand economics well enough to make reasoned judgments about both personal economic questions and broader questions of economic policy. Through the standards, students will develop an economic way of thinking and problem solving in order to understand and apply basic economic principles to decisions they will make as consumers, members of the workforce, citizens, voters, and participants in a global marketplace. This type of critical thinking will prepare students to weigh not only the short-term effects of a decision, but also its long-term effects and possible unintended consequences. They will understand that because resources are scarce relative to wants, individuals and society must choose how to allocate goods and services among competing uses. Students will also understand that these choices and trade-offs significantly affect the quality of people's lives and explain historical developments and patterns, the results of trade, and the distribution of income and wealth in local, regional, national, and world economies. Understanding the process and components of economic reasoning also will provide a vital framework within which to analyze current issues and public policies, and to understand the complex relationships among economic, political, and cultural systems.

It is possible to spend a lifetime studying these areas without learning about every significant event. Our best hope in the years of formal schooling is that students learn to tell the important from the unimportant and to know enough about history, geography, economics, and civics and government to inform themselves about the vital connections between the present and the past. Our very first priority is to prepare our young people for the office of citizen. In conjunction with standards frameworks in other disciplines, these standards are designed to help all schools ensure that they promote a high level of academic rigor and provide sound opportunities for all students to learn.

Table 1. Social Studies Standards

STANDARD 1: History

Students analyze the human experience through time, recognize the relationships of events and people, and interpret significant patterns, themes, ideas, beliefs, and turning points in Arizona, American, and world history.

STANDARD 2: Civics/Government

Students understand the ideals, rights, and responsibilities of citizenship, and the content, sources, and history of the founding documents of the United States, with particular emphasis on the Constitution and how the government functions at the local, state, national, and international levels.

STANDARD 3: Geography

Students analyze locations, regions, and spatial connections, recognizing the natural and cultural processes that impact the way in which people and societies live and interact with each other and their environment.

STANDARD 4: Economics

Students develop economic reasoning skills to apply basic economic concepts, assess problems, make choices, and evaluate the choices of others as consumers, workers, and citizens participating in local, national, and global economies.

Social Studies Standards

STANDARD 1: HISTORY

PROFICIENCY (Grades 9-12)

Students know and are able to do all of the above and the following:

- **1SS-P1. Apply chronological and spatial thinking to understand the meaning, implications, and import of historical and current events.**

(Note: Historical research skills and analytical skills. These skills are to be learned and applied to the content standards for grades 9-12.)

PO 1. Compare the present with the past, evaluating the consequences of past events and decisions and determining the lessons learned and analyze how change occurs

PO 2. Analyze how change occurs

PO 3. Use a variety of maps and documents to interpret human movement and the diffusion of ideas, technological innovations, and goods

- **1SS-P2. Demonstrate knowledge of research sources and apply appropriate research methods, including framing open-ended questions, gathering pertinent information, and evaluating the evidence and point of view contained within primary and secondary sources.**

(Note: Historical research skills and analytical skills. These skills are to be learned and applied to the content standards for grades 9-12)

PO 1. Identify community resources that preserve historical information--such as libraries, museums, historical societies, a courthouse, the world wide web, family records, elders--and explain how to access this knowledge

PO 2. Identify an author's argument, viewpoint, or perspective in an historical account

PO 3. Distinguish "facts" from author's opinions, and evaluate an author's implicit and explicit philosophical assumptions, beliefs, or biases about a subject

PO 4. Compare and contrast different accounts of the same event, including hypothesizing reasons for differences and similarities, authors' use of evidence, and distinctions between sound generalizations and misleading oversimplifications

- **1SS-P3. Develop historical interpretations in terms of the complexity of cause and effect and in the context in which ideas and past events unfolded.**

(Note: Historical research skills and analytical skills. These skills are to be learned and applied to the content standards for grades 9-12.)

PO 1. Show connections between particular events and larger social, economic, and political trends and developments

PO 2. Interpret past events and issues within the context in which an event unfolded rather than solely in terms of present day norms and values

PO 3. Hypothesize how events could have taken different directions

FOCUS: World History (Ancient Greece to Modern Age)

State standards require the instruction of World History at both the Essentials level and the Proficiency level. Due to the chronological structure of the content, the concepts addressed at the Essentials level provide the foundation for the understanding and appreciation of the concepts presented at the Proficiency level. The following Proficiency concepts are to be taught so as to bridge the time elapsed between the periods of study and to allow students an opportunity to gain deeper understanding of previously studied events in World History.

- **1SS-P4(1SS-E12). Describe the geographic, political, economic, and social characteristics of the Ancient Greek and Roman civilizations and their enduring impact on later civilizations, with emphasis on:**

PO 1. the influence of the geography of the Mediterranean on the development and expansion of the civilizations

PO 2. the development of concepts of government and citizenship, specifically democracy, republics, and codification of law

PO 3. scientific and cultural advancements, including networks of roads, aqueducts, art and architecture, literature and theatre, mathematics, and philosophy

PO 4. the contributions and roles of key figures, including Socrates, Alexander the Great, Cleopatra, Julius Caesar, and Augustus

- **1SS-P4(1SS-E13). Describe the political and economic events and the social and geographic characteristics of Medieval European life and their enduring impacts on later civilizations, with emphasis on:**

PO 1. the creation and expansion of the Byzantine empire and the reasons for the fall of Rome

PO 2. the new forms of government, feudalism, and the beginning of limited government with the Magna Carta

PO 3. the role of the Roman Catholic church and its monasteries, including the affect on education and the arts

PO 4. the Crusades, including how they helped to introduce Muslim ideas and products to Europe

PO 5. the impact of the Black Plague, including how it contributed to an end to the feudal system

PO 6. contributions and roles of key figures, including Charlemagne, Joan of Arc, and Marco Polo

- **1SS-P4. Describe the democratic and scientific revolutions as they evolved throughout the Enlightenment and their enduring effects on political, economic, and cultural institutions, with emphasis on:**

PO 1. the Copernican view of the universe and Newton's natural laws

PO 2. conflict between religion and the new scientific discoveries, including the impact of Galileo's ideas and the introduction of the scientific method as a means of understanding the universe

PO 3. ideas that led to parliamentary government and the rights of Englishmen through the Puritan revolt and the Glorious Revolution

PO 4. the worldwide spread of the ideas of the American Revolution

PO 5. challenges to absolute monarchy, including the French Revolution

PO 6. the Napoleonic Era, including the codification of law

PO 7. Latin America's wars of independence, including Simon Bolivar

- **1SS-P5. Explain the causes and effects of the Industrial Revolution, with emphasis on:**

PO 1. how scientific and technological changes promoted industrialization in the textile industry in England

PO 2. the impact of the growth of population, rural-to-urban migrations, growth of industrial cities, and emigration out of Europe

PO 3. the evolution of work and the role of labor, including the demise of slavery, division of labor, union movement, and impact of immigration

PO 4. the political and economic theories of capitalism and socialism, including Adam Smith and Karl Marx

- **1SS-P6. Analyze patterns of change during the nineteenth century era of imperialism from varied perspectives, with emphasis on:**

PO 1. the clash between cultures, including the Zulu wars in Africa, the Sepoy Rebellion in India, and the Boxer Rebellion in China

PO 2. the development of the British Empire around the world

PO 3. the nationalism that led to conflict between European nations as they competed for raw materials and markets, including the rush for colonies in Africa and Asia

PO 4. the immediate and long-term responses by people under colonial rule

- **1SS-P7. Trace the causes, effects and events of World War I, with emphasis on:**

PO 1. the rise of nationalism, including the unification of Germany and Otto Von Bismarck's leadership

PO 2. the rise of ethnic and ideological conflicts, including the Balkans, Austria-Hungary, and the decline of the Ottoman Empire

PO 3. the importance of geographic factors in military decisions and outcomes

PO 4. the human costs of the mechanization of war such as the machine gun, airplane, gasoline, submarine, trench warfare, and tanks

PO 5. the effects of the Russian Revolution and the implementation of communist rule

PO 6. the conditions and failures of the Treaty of Versailles and the League of Nations

- **1SS-P8. Analyze the causes and events of World War II, with emphasis on:**

PO 1. the rise of totalitarianism and militarism in Japan and Germany

PO 2. Nazi Germany's attempts to eliminate the Jews and other minorities through the Holocaust

PO 3. influence of world conflicts prior to World War II, including the Spanish Civil War, Italian invasion of Ethiopia, and the Japanese invasion of Manchuria

PO 4. Germany's aggression that led to the war, including England's attempts at appeasement

PO 5. the Stalin-Hitler Pact of 1939 and the invasion of Poland

PO 6. the political, diplomatic and military leadership, including Winston Churchill, Joseph Stalin, Franklin Roosevelt, Emperor Hirohito, Adolf Hitler, Benito Mussolini, George Patton, and Rommel

PO 7. the principal theaters of battle, major turning points, and geographic factors in military decisions and outcomes, including Pearl Harbor, D day invasion, the use of the atomic bomb, and the reasons for the Allied victory

- **1SS-P9. Analyze the international developments after World War II and during the Cold War, with emphasis on:**

PO 1. war crimes trials, including the Nuremberg Trials

PO 2. the creation of the modern state of Israel and conflicts in the Middle East

PO 3. the rebuilding of Western Europe, including the Marshall Plan and NATO

PO 4. Soviet control of Eastern Europe, including the Warsaw Pact and Hungarian Revolt

PO 5. the creation and role of the United Nations, including the Security Council

PO 6. Mao Tse-tung and the Chinese Revolution, including the Long March, Taiwan, and the Cultural Revolution

PO 7. the legacy of genocide from totalitarian regimes, including Stalin, Hitler, Mao, and Pol Pot

PO 8. the reasons for the collapse of the Soviet Union and end of communism in Europe

- **1SS-P10. Evaluate the ideologies and outcomes of independence movements in the developing world, with emphasis on:**

PO 1. French Indochina and the Vietnam War, including the role of Ho Chi Minh

PO 2. Gandhi's non-violence movement for India's independence

PO 3. the fight against apartheid in South Africa and evolution from white minority government, including the role of Nelson Mandela

PO 4. the struggle for democracy in Latin America

PO 5. the Mexican Revolution, including land and labor reforms

FOCUS: United States/Arizona Modern History (American Revolution to Current Issues)

State standards require the instruction of U.S. History at both the Essentials level and the Proficiency level. Due to the chronological structure of the content, the concepts addressed at the Essentials level provide the foundation for the understanding and appreciation of the concepts presented at the Proficiency level. The following Proficiency concepts are to be taught so as to bridge the time elapsed between the periods of study and to allow students an opportunity to gain deeper understanding of previously studied events in U.S. History.

- **1SS-P11(1SS-E16). Explain the economic and political reasons for the American Revolution, with emphasis on:**

PO 1. the attempts to regulate colonial trade, including the Tea Act, Stamp Act, and Intolerable Acts

PO 2. the colonists' reaction to British policy, including the boycotts, the Sons of Liberty, and petitions and appeals to Parliament

PO 3. the ideas expressed in the Declaration of Independence

- **1SS-P11(1SS-E17). Describe the aspirations, ideals, and events that served as the foundation for the creation of a new national government, with emphasis on:**

PO 1. the Articles of Confederation and the Constitution, and the success of each in implementing the ideals of the Declaration of Independence

PO 2. the major debates of the Constitutional Convention and their resolution

PO 3. the contributions and roles of major individuals in the writing and ratification of the Constitution, including George Washington, James Madison, Alexander Hamilton, and John Jay

PO 4. Struggles over ratification of the Constitution and the creation of the Bill of Rights

- **1SS-P11(1SS-E18). Describe the actions taken to build one nation from thirteen states, with emphasis on:**

PO 1. the precedents established by George Washington, including the cabinet and two terms of the presidency

PO 2. Alexander Hamilton's actions to create a financially strong nation, including the creation of a National Bank and payment of debts

PO 3. the creation of political parties, including the ideals of the Democratic Republicans and the Federalists

- **1SS-P11(1SS-E21). Explain how sectionalism caused the Civil War, with emphasis on:**

PO 1. the different natures of the economies of the North, South, and West

PO 2. the addition of new states to the Union and the balance of power in the Senate, including the Missouri and 1850 Compromises

PO 3. the extension of slavery into the territories, including the Dred Scott Decision, the Kansas-Nebraska Act, and the role of abolitionists such as Frederick Douglass and John Brown

PO 4. the emergence of Abraham Lincoln as a national figure in the Lincoln-Douglas debates

PO 5. the presidential election of 1860, Lincoln's victory, and the South's secession

- **1SS-P11(1SS-E22). Explain the course and consequences of the Civil War and how it divided the American people, with emphasis on:**

PO 1. the unique nature of the Civil War, including the impact of Americans fighting Americans, the high casualties caused by disease and the type of warfare, and the widespread destruction of American property

PO 2. contributions and significance of key individuals, including Abraham Lincoln, Robert E. Lee, William Tecumseh Sherman, and Ulysses S. Grant

PO 3. the major turning points of the Civil War, including Gettysburg

PO 4. the role of African-Americans

PO 5. the purpose and effect of the Emancipation Proclamation

PO 6. the strategic importance of the Southwest as both sides attempted to secure a route to California

- **1SS-P11(1SS-E23). Analyze the character and lasting consequences of Reconstruction, with emphasis on:**

PO 1. Lincoln's plans for reconstruction of the South

PO 2. Lincoln's assassination and the ensuing struggle for control of Reconstruction, including the impeachment of Andrew Johnson

PO 3. attempts to protect the rights of, and enhance opportunities for, the freedmen, including the basic provisions of the Thirteenth, Fourteenth, and Fifteenth Amendments to the United States Constitution

PO 4. the rise of the Ku Klux Klan and the development of Jim Crow laws following Reconstruction

- **1SS-P11. Analyze the transformation of the American economy and the changing social and political conditions in the United States in response to the Industrial Revolution, with emphasis on:**

PO 1. the forces behind the quick and successful growth of the United States, including geographic security, abundant natural resources, heavy foreign investment, individual and economic freedoms, skilled but cheap and mobile labor, and use of tariffs and subsidies

PO 2. innovations in technology, evolution of marketing techniques, and changes to the standard of living

PO 3. the development of monopolies and their impact on economic and political policies, including laissez faire economics and the ideas of Social Darwinism

PO 4. the growth of cities created by the influx of immigrants and rural-to-urban migrations of Americans and the racial and ethnic conflicts that resulted

PO 5. the efforts of workers to improve working conditions, including organizing labor unions and strikes, and the reaction of business, including strikebreakers, and the Bisbee Deportation

PO 6. Populism and William Jennings Bryan, Jane Addams, muckrakers, and the economic problems faced by farmers

PO 7. Theodore Roosevelt's reforms in trustbusting and conservation of natural resources such as national parks like the Grand Canyon and reclamation projects like the Salt River Project

PO 8. progressive reforms, including the national income tax, direct election of Senators, women's Suffrage, Prohibition, and Arizona's Constitution

- **1SS-P12. Analyze the development of the American West and specifically Arizona, with emphasis on:**

PO 1. the availability of cheap land and transportation, including the role of the railroads and the use of immigrant Chinese and Irish labor

PO 2. the development of resources and the resulting population and economic patterns, including mining, ranching, and agriculture

PO 3. the effects of development on American Indians and Mexican Americans, including Indian Wars, establishment of reservations, and land displacement

- **1SS-P13. Analyze the United States' expanding role in the world during the late nineteenth and early twentieth centuries, with emphasis on:**

PO 1. the causes for a change in foreign policy from isolationism to intervention

PO 2. the debate between pro- and anti-imperialists over taking the Philippines

PO 3. the results of the Spanish American War

PO 4. the expanding influence in the Western hemisphere, including the Panama Canal

PO 5. the events that led to United States involvement in World War I and the United States' impact on the outcome

PO 6. the impact of World War I on the United States, including the Red Scare

PO 7. Wilson's involvement in the peace process and the United States rejection of the League of Nations

- **1SS-P14. Analyze the major political, economic, and social developments that occurred between World War I and World War II, including the causes and effects of the Great Depression, with emphasis on:**

PO 1. social liberation and conservative reaction during the 1920's, including flappers, Prohibition, Harlem Renaissance, and the Scopes trial

PO 2. the rise of mass production techniques and the impact of the automobile and appliances on the prosperity and standard of living for many Americans

PO 3. the causes of the Great Depression, including unequal distribution of income, weaknesses in the farm sector, and the policies of the Federal Reserve Bank

PO 4. the human and natural crises of the Great Depression, including unemployment, food lines, Dust Bowl, and the western migration of Midwest farmers

PO 5. the policies and controversies that emerged from the New Deal, including the works programs, farm supports, social security, advances in organized labor, challenges to the Supreme Court, and impacts in Arizona such as the Navajo Livestock Reduction

- **1SS-P15. Analyze the role of the United States in World War II, with emphasis on:**

PO 1. reasons the United States moved from a policy of isolationism to international involvement, including Pearl Harbor

PO 2. events on the home front to support the war effort, including war bond drives, the mobilization of the war industry, women and minorities in the work force, including Rosie the Riveter; the internment of Japanese-Americans, including the camps in Poston and on the Gila River Indian Reservation, Arizona

PO 3. Arizona contributions to the war effort, including the Navajo Code Talkers, Ira Hayes, and local training bases

PO 4. postwar prosperity and the reasons for it

- **1SS-P16. Analyze the impact of World War II and the Cold War on United States foreign policy, with emphasis on:**

PO 1. the implementation of the foreign policy of containment, including the Truman Doctrine, the Berlin Blockade, Berlin Wall, Bay of Pigs, Korea, and Vietnam

PO 2. the Red Scare, including McCarthyism and the House Un-American Activities Committee

PO 3. nuclear weapons and the arms race

PO 4. Sputnik and the space race

PO 5. Arizona's industrial development, movement to the suburbs, and growth in the "Sunbelt"

- **1SS-P17. Analyze the development of voting and civil rights in the United States, with emphasis on:**

PO 1. intent and impact of the Thirteenth, Fourteenth, and Fifteenth Amendments to the Constitution

PO 2. segregation as enforced by Jim Crow laws

PO 3. the use of the judicial system to secure civil rights, including key court cases such as *Brown v. Board of Education of Topeka*

PO 4. the role and methods of civil rights advocates, including Martin Luther King, Jr., Malcolm X, Rosa Parks, and Cesar Chávez

PO 5. the passage and effect of voting rights legislation, including 1964 Civil Rights Act, Voting Act of 1965, and the Twenty-fourth Amendment to the Constitution

PO 6. the effects of the women's rights movement

- **1SS-P18. Apply the skills of historical analysis to current social, political, geographic, and economic issues facing the United States, with emphasis on:**

PO 1. impact of changing technology on America's living patterns, popular culture, and the environment, including the impact of automobiles, dams, and air-conditioning to Arizona's development

PO 2. reasons for, and impact of, the nation's changing immigration policy, including Mexico-United States border issues

PO 3. the persistence of poverty, and the Great Society's attempt to alleviate it

PO 4. the "Watergate Scandal" and its impact on American attitudes about government

DISTINCTION (Honors)

Students know and are able to do all of the above and the following:

- **1SS-D1. Analyze historical and current events as a historian using primary and secondary sources to evaluate the legitimacy of the commentaries of an event and draw conclusions, with emphasis on:**

PO 1. what happened, drawing from both written sources and narratives

PO 2. what is accurate information and what is inaccurate information

PO 3. what was the significance of the event with focus on what can legitimately be concluded as impacts or results of the event

- **1SS-D2. Use historical knowledge to draw conclusions in an attempt to explain where specific current events will lead, with emphasis on:**

PO 1. drawing historical analogies and defending why any given current event is like an historical event, including the lessons to be learned

PO 2. describing a current event in detail with depth of understanding of the events history, geography, politics and economics

PO 3. evaluating an historical piece of literature, either fiction or non-fiction

STANDARD 2: CIVICS/GOVERNMENT

Students understand the ideals, rights, and responsibilities of citizenship, and the content, sources, and history of the founding documents of the United States, with particular emphasis on the Constitution and how the government functions at the local, state, national, and international levels.

(Proficiency Grades 9-12)

- **2SS-P1. Explain the philosophical foundations of the American political system in terms of the inalienable rights of man and the purpose of government, with emphasis on:**

- PO 1. the basic principles of natural rights expressed by John Locke, including the state of nature, property, equality, and dissolution of government (*Second Treatise of Government*)
- PO 2. the foundational principles of laws by William Blackstone including the nature of laws in general and the absolute rights of individuals (*Commentaries on the Laws of England*)
- PO 3. the importance to the Founders of the rights of Englishmen, the Magna Carta, the representative government in England, and the English Bill of Rights
- PO 4. the fundamental principles in the Declaration of Independence
- PO 5. the moral and ethical ideals which have their antecedent in the Judeo-Christian tradition

- **2SS-P2. Analyze the historical sources and ideals of the structure of the United States government, with emphasis on:**

- PO 1. the principles of democracy and republican form of government developed by the Greeks and Romans, respectively
- PO 2. separation of powers (Charles de Montesquieu)

- **2SS-P3. Analyze why and how the United States Constitution was created by the framers, with emphasis on:**

- PO 1. failures of the Articles of Confederation that led to the Philadelphia Convention
- PO 2. proposals for representation in the Virginia and the New Jersey Plans that led to the Great Compromise
- PO 3. development of a federal system of government reserving powers to the states and the people
- PO 4. the Federalist and anti-Federalist positions
- PO 5. the development of state constitutions and how this experience influenced the framing of the United States Constitution and Bill of Rights

- **2SS-P4. Analyze the structure, powers, and roles of the legislative branch of the United States government, with emphasis on:**

- PO 1. specific powers delegated in Article I of the Constitution, checks and balances such as veto override, impeachment, Senate confirmation of appointments, and treaties
- PO 2. the role of competing factions (*The Federalist* Number 10)
- PO 3. how the lawmaking process operates, including the role of leadership within Congress
- PO 4. the influence of the unelected such as staff, lobbyists, and special interest groups

- **2SS-P5. Analyze the structure, powers, and roles of the executive branch of the United States government, with emphasis on:**

- PO 1. specific powers delegated in Article II of the Constitution, including checks and balances such as the veto and judicial appointment power
- PO 2. the roles and duties of the presidency and the development and function of the executive branch, including the cabinet and federal bureaucracy
- PO 3. election of the president through the nomination process, national conventions, and electoral college

- **2SS-P6. Analyze the structure, powers, and roles of the judicial branch of the United States government, including landmark United States Supreme Court decisions, with emphasis on:**

- PO 1. specific powers delegated by the Constitution in Article III and judicial review developed in *Marbury v. Madison* (*The Federalist* Number 80)
- PO 2. a dual court system of state and federal courts

- **2SS-P7. Analyze the division and sharing of power within the federal system of government, with emphasis on:**

- PO 1. federalism, expressed powers, implied powers, inherent powers, and concurrent powers
- PO 2. state sovereignty, the reserved powers, and the resulting conflicts between federal, state, and local governments (*The Federalist* Number 45)
- PO 3. the issues of federalism raised in *McCulloch v. Maryland*
- PO 4. the sovereignty of tribal governments

- **2SS-P8. Analyze the rights, protections, limits, and freedoms included in the United States Constitution and the Bill of Rights, with emphasis on:**

- PO 1. Constitutional mandates such as the right of habeas corpus, no bill of attainder, and the prohibition of ex post facto laws

- PO 2. the First Amendment guarantees of freedom of religion, speech, press, assembly, and petition
- PO 3. the Second Amendment right to bear arms
- PO 4. the Fourth, Fifth, and Sixth Amendments of search and seizure, rights of the accused, right to a fair and speedy trial, and other legal protections
- PO 5. the Fourteenth Amendment protection of due process and equal protection under the law
- PO 6. conflicts which occur between rights, including the tensions between the right to a fair trial and freedom of the press, and between majority rule and individual rights

- **2SS-P9. Analyze the structure, power, and organization of Arizona's government as expressed in the Arizona Constitution, with emphasis on:**

- PO 1. direct democracy by initiative, referendum, and recall processes
- PO 2. the election process including redistricting, voter registration, and primaries
- PO 3. Arizona's legislature, its structure, how a bill becomes law, and the impeachment process
- PO 4. the five major executive officers and their specific powers
- PO 5. Arizona's courts, appointment of judges, and elections to retain positions

- **2SS-P10. Demonstrate skills related to the duties and obligations of citizenship needed to participate in America's government, with emphasis on:**

- PO 1. the connections between self-interest, the common good, and the essential element of civic virtue (George Washington's Farewell Speech)
- PO 2. obeying the law, serving on juries, paying taxes, voting, and military service
- PO 3. analyzing public issues, policy making, and evaluating candidates and their positions

- **2SS-P11. Compare the United States system of politics and government to other systems of the world, with emphasis on:**

- PO 1. advantages and disadvantages of unitary, confederate, and federal systems
- PO 2. the ways powers are distributed and shared in a parliamentary system
- PO 3. free versus totalitarian systems of government

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **2SS-D1. Analyze the historical and philosophical underpinnings of United States Constitution and government, and the underlying democratic theory and pluralism, with emphasis on:**
 - PO 1. concepts of Common Law as developed in England and expressed in Sir William Blackstone's *Commentaries on the Laws of England*
 - PO 2. the nature of government expressed in John Locke's *Second Treatise of Civil Government*
 - PO 3. foundations of representative government established in the English House of Commons
 - PO 4. foundations of fair trial and the rights of the accused established in English Common Law and the English justice system
 - PO 5. Puritan beliefs in work ethic and congregational participation in decision-making
 - PO 6. the argument for freedom of speech and press established in the trial of John Peter Zenger (1735)
 - PO 7. an evaluation of the elitist view developed by Charles A Beard in *An Economic Interpretation of the Constitution (1913)*
 - PO 8. concepts of limitation of government power through separation of power expressed in *The Federalist* Numbers 1, 47, 48, and 51
 - PO 9. concepts of federalism expressed in *The Federalist* Numbers 16, 17, & 39
 - PO10. reflections of the American democracy detailed by Alexis de Tocqueville in *Democracy In America*
 - PO11. the argument for federal supremacy by the U.S. Supreme Court in *McCulloch v. Maryland*
 - PO12. An evaluation of elitist and pluralist theories of government
- **2SS-D2. Evaluate American culture, political beliefs and behaviors of individuals in the political process, with emphasis on:**
 - PO 1. origins of American political culture, including the role of family and religion and the means by which schools and the media act to perpetuate or change beliefs
 - PO 2. the evidence of shared beliefs in liberty, democracy, equality of opportunity, individualism, civic duty
 - PO 3. ways in which individuals choose to express their beliefs
 - PO 4. the difference between political culture and ideology
 - PO 5. recognize ideological perspectives including conservative, liberal, progressive and libertarian
 - PO 6. what leads individuals to differ in political beliefs and behaviors

- PO 7. evaluation of divergent views of political process held by specific ethnic and regional groups and the political ramifications of these differences
- PO 8. processes by which citizens learn about politics
- PO 9. nature, sources, and consequences of public opinion
- PO10. factors in voting and other means of political participation

- **2SS-D3. Evaluate political parties, interest groups, and mass media, including the mechanisms of organizing that facilitate the communication of interests and preferences by like-minded citizens, with emphasis on:**

- PO 1. political parties and elections, including their functions, organization, historical development, and effects on the political process
- PO 2. interest groups and Political Action Committees (PACs), their activities, and the way they influence the political process and policymaking
- PO 3. the mass media, their functions and structures, and the way media influences the political process and policymaking

- **2SS-D4. Evaluate and analyze the organization, power and interrelationships of institutions of national government: the Congress, the presidency, the bureaucracy, and the federal courts, with emphasis on:**

- PO 1. the major formal and informal institutional arrangements of powers
- PO 2. the relationships among these four institutions
- PO 3. the links between these institutions and political parties, interest groups, the media, subnational governments, and public opinion

- **2SS-D5. Analyze the interactions, dynamics, actors, interests, institutions and processes that result in the formation of policy in the United States, with emphasis on:**

- PO 1. the development of policy agendas
- PO 2. the role and processes in policymaking of the Congress, president, bureaucracy and the courts
- PO 3. an analysis of policymaking relationships, including iron triangles and issues networks
- PO 4. evaluating policymaking in terms of cost/benefit analysis, recognizing perceptions of gaining or losing a benefit
- PO 5. recognizing linkages between policy processes and the following: political institutions and federalism, political parties, interest groups, public opinion

- **2SS-D6. Develop and defend issues involving civil rights and civil liberties, with emphasis on:**

- PO 1. analysis of the workings of the Supreme Court
- PO 2. legal and political evolution of court decisions

- PO 3. development of civil liberties and civil rights by judicial interpretation
- PO 4. assessment of the strengths and weaknesses of Supreme Court decisions as tools for change
- PO 5. knowledge of substantive rights and liberties
- PO 6. the impact of the Fourteenth Amendment on the constitutional development of rights and liberties

STANDARD 3: GEOGRAPHY¹

Students analyze locations, regions, and spatial connections, recognizing the natural and cultural processes that impact the way in which people and societies live and interact with each other and their environment.

(Proficiency Grades 9-12)

FOCUS: The Contemporary World

- **3SS-P1. Acquire, process, and analyze geographic information about people, places and environments by constructing, interpreting, and using geographic tools, with emphasis on:**
 - PO 1. constructing and interpreting maps to infer geographic relationships, distributions, and features, including interpreting thematic maps of world population growth and United States and international time zones
 - PO 2. selecting appropriate maps and other graphic representations to analyze geographic problems and changes, including aerial photography to analyze changes in land use, such as urban growth
- **3SS-P2. Analyze natural and human characteristics of places in the world studied to define regions, their relationships, and their pattern of change, with emphasis on:**
 - PO 1. the interrelationships among natural and human processes that shape the geographic characteristics of regions, including connections among economic development, urbanization, population growth, and environmental change
 - PO 2. applying the concept of region to organize the study of a geographic issue using multiple criteria
 - PO 3. ways, places, and regions studied reflect economic, physical, and cultural changes and how their relationships, roles and patterns may change as a result
 - PO 4. how the character and meaning of a place is related to its economic, social, and cultural characteristics and why different groups in society view places and regions differently

¹ See Appendix for reference to Physical Geography

- **3SS-P3. Analyze how economic, political, cultural, and social processes interact to shape patterns and characteristics of human populations, interdependence, and cooperation and conflict, with emphasis on:**

- PO 1. the interpretation of charts and graphics of population growth and demographics, including birth and death rates, population growth rates, doubling time and life expectancy
- PO 2. the factors that contribute to human migration and the affect of migration on the character of places of origin and destination, including along the U.S.-Mexico border
- PO 3. how cooperation and conflict are involved in shaping the distribution of political, social, and economic spaces on the Earth at different scales, including Israel and the Middle East, the former Soviet Union, and sub-Saharan Africa
- PO 4. how differing points of view and self-interests play a role in conflict over territory and resources, including the impact of culture, politics, strategic locations, and resources
- PO 5. the spread of cultural traits that lead to cultural convergence and divergence, including the widespread use of English and the role of the global media
- PO 6. function and change in the size, structure, and arrangement of urban and suburban areas, including the growth of Arizona cities
- PO 7. interrelationships among settlement, migration, population-distribution patterns, landforms, climates, and patterns of vegetation

- **3SS-P4. Analyze the interactions between human activities and the natural world in different regions, including changes in the meaning, use, distribution, and importance of natural resources, with emphasis on:**

- PO 1. how the Earth's natural systems affect humans, including how climatic and seasonal changes impact different regions of the globe
- PO 2. how humans perceive, react to, and prepare for natural hazards
- PO 3. how changes in the natural environment can increase or diminish its capacity to support human activity
- PO 4. ways technology has affected the definition and use of, as well as access to, resources and expanded human capacity to modify the natural environment
- PO 5. the diversity and productivity of ecosystems
- PO 6. policies and programs for resource use and management, including the trade-off between environmental quality and economic growth in the twentieth century

- **3SS-P5. Apply geographic knowledge of people, places, and environments to understand the past and present and plan for the future, with emphasis on:**

- PO 1. using geographic knowledge, skills, and perspectives to solve contemporary problems in the community and Arizona
- PO 2. how different viewpoints about place influence the development of policies designed to use and manage resources at local, national, and international scales
- PO 3. how changing perceptions of places and environments affect the choices of people and institutions, including where individuals choose to live and work

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **3SS-D1. Interpret a full range of geographic representations, with emphasis on:**

- PO 1. the mathematical location via map grids
- PO 2. the characteristics of a site
- PO 3. the characteristics of different projections
- PO 4. the definition and types of scale
- PO 5. map symbology/legends, including qualitative and quantitative aspects of points, lines, and areas
- PO 6. visual representation of geographic data that are best suited for different types of analyses

- **3SS-D2. Analyze the world's physical geography, including Earth/Sun systems, weather systems, climate patterns, biogeography patterns, ocean characteristics, and basic landform processes, with emphasis on:**

- PO 1. revolution and rotation, time, days, seasons, time zones, the Tropics of Cancer and Capricorn, and the Arctic and Antarctic circles
- PO 2. climatic elements, the difference between weather and climate, convectional and cyclonic storms and the analysis of a weather map
- PO 3. climatic controls and relationship to latitude, altitude, and position on a continent
- PO 4. distribution patterns as related to climate, soils, and terrain
- PO 5. major ocean currents and their affects on climate
- PO 6. aolian, glacial, fluvial, wave, weathering, and mass wasting landform processes

- **3SS-D3. Interpret basic patterns of agricultural and rural land use, with emphasis on:**

- PO 1. the locations of the key agricultural hearths and the distribution of agriculture on the surface of the Earth
- PO 2. the relationship between agricultural land use and the natural environment
- PO 3. crops cultivated in subsistence, plantation, and commercial agriculture and the methods of each
- PO 4. similarities and differences between agricultural patterns in developed and developing countries, including the factors that contribute to crop selection
- PO 5. effects of the Green Revolution (e.g., biotechnology)
- PO 6. the environmental consequences of certain agricultural practices, including monoculture, extensive use of chemicals, overgrazing, crop rotation
- PO 7. the application of Von Thunen's model to selected case studies
- PO 8. alternative uses of rural land and the controversial issues pertaining to the use of rural land
- PO 9. the relationships among social, economic, and political factors and agricultural land use

- **3SS-D4. Interpret basic patterns of industrial and economic development, with emphasis on:**

- PO 1. the dynamic patterns of the space economy, such as categories of economic activity and comparative advantage
- PO 2. the origin of industrialization and the diffusion of industry
- PO 3. factors influencing the location of industry, including site factors, situation factors, distribution of industry worldwide
- PO 4. the affects of industrialization on culture and the environment in terms of benefits, costs, pollution, land degradation, waste, and cultural locational patterns
- PO 5. the components of industrial development: core periphery argument, dependency theory, indicators of development, theories of economic development, self-sufficiency, international trade, tourism

- **3SS-D5. Interpret basic patterns of political geography, with emphasis on:**

- PO 1. personal shape and territoriality; and perceptions of the political world
- PO 2. the spatial organization of territory and the development of concepts of territory
- PO 3. the concepts and history of geopolitics
- PO 4. the political geography within a state
- PO 5. the concepts of imperialism, colonialism, nationalism, decolonization, and current colonies
- PO 6. issues of contemporary international relations

- **3SS-D6. Interpret basic patterns of population geography, with emphasis on:**

- PO 1. population data reliability in terms of census biases, Choropleth Map implications, and population pyramids
- PO 2. population growth patterns over time, including J-curve, global scale, concentrations of people in different regions, and basic concepts of density
- PO 3. pros and cons of Thomas Malthus' concepts
- PO 4. population structures, including population pyramids, dependency ratio, cohort, life expectancy, and gender patterns
- PO 5. the demographic transition, including the European Model, rest of the world
- PO 6. population policies in different regions, including the impacts of population on the environment
- PO 7. the basic concepts of medical geography
- PO 8. the basic processes and forces involved in migration, including catalysts and barriers, voluntary migration, push and pull factors, immigration policy, and forced migrations

- **3SS-D7. Interpret basic patterns of urban geography, including an analysis of case studies of urban growth, with emphasis on:**

- PO 1. the basic concepts of urbanization, including the origin, evolution, and functions of cities
- PO 2. basic components of the built environment and social space, such as the central business district, suburbanization, and urban realms

STANDARD 4: ECONOMICS

Students develop economic reasoning skills to apply basic economic concepts, assess problems, make choices, and evaluate the choices of others as consumers, workers, and citizens participating in local, national, and global economies.

(Proficiency Grades 9-12)

- **4SS-P1. Analyze the implications of the economic problem of scarcity, with emphasis on:**

- PO 1. how limited resources and unlimited human wants cause individuals, governments, and nations to choose some things and give up others
- PO 2. the factors of production--land, labor, capital and entrepreneurship--and how they are used in production
- PO 3. how producers, consumers, savers, and investors make decisions by analyzing anticipated marginal benefits and costs that usually involve trade-offs (marginal analysis)

- **4SS-P2. Use economic concepts, theories, principles, and quantitative methods to analyze current events, with emphasis on:**

- PO 1. using tables, graphs, equations, diagrams, and charts to interpret economic information, including the inflation rate, unemployment rate, and economic growth rate
- PO 2. using production possibilities curves to illustrate opportunity costs and trade-offs
- PO 3. evaluating the economic implications of current events as found in such sources as magazine articles, newspaper articles, radio and television reports, editorials, and Internet sites

- **4SS-P3. Describe how households and firms are interdependent and how their relationship is affected by trade, exchange, money, and banking, with emphasis on:**

- PO 1. why voluntary exchange occurs only when all participating parties expect to gain from the exchange
- PO 2. the role and interdependence of households, firms, and government in the circular flow model of economic activity
- PO 3. the role of entrepreneurs in a market economy and how profit is an incentive that leads entrepreneurs to accept the risks of business failure
- PO 4. the role of financial institutions and securities markets

- **4SS-P4. Analyze the similarities and differences among economic systems, with emphasis on:**

- PO 1. the characteristics of market, command, and mixed economic systems, including roles of production, distribution, and consumption of goods and services
- PO 2. the benefits and costs of market and command economies
- PO 3. the characteristics of a mixed-market economy of the United States, including such concepts as private ownership, profit motive, consumer sovereignty, competition, and government regulation
- PO 4. the role of private property in conserving scarce resources and providing incentives in a market economy
- PO 5. how the incentives inherent in a market economy preserve political and economic freedom

- **4SS-P5. Describe the basic principles of microeconomics, with emphasis on:**

- PO 1. supply, demand, and their determinants
- PO 2. how a market price is determined
- PO 3. interpreting graphs that demonstrate changes in supply and demand
- PO 4. how price ceilings and floors cause shortages or surpluses
- PO 5. comparing and contrasting monopoly and competitive behaviors

- **4SS-P6. Evaluate the economic role of government in the mixed-market economy of the United States, with emphasis on:**

- PO 1. how the benefits of government policies must be compared to the costs before determining which policies to adopt
- PO 2. the revenue of and spending by federal, state, and local governments in providing national defense, addressing environmental concerns, defining and enforcing property rights, regulating markets, and providing other goods and services
- PO 3. the effects of progressive, proportional, and regressive income taxes on different income groups
- PO 4. the role of self-interest in decisions of voters, elected officials, and public employees

- **4SS-P7. Describe the basic principles of macroeconomics, with emphasis on:**

- PO 1. how inflation, unemployment, and gross domestic product statistics are determined and used in policy decisions
- PO 2. the effects of inflation and deflation on different groups
- PO 3. the economic and non-economic consequences of unemployment
- PO 4. fiscal policy and its effects on inflation, unemployment, and economic growth
- PO 5. the functions of the Federal Reserve System and its influence on the economy
- PO 6. the effects of monetary policy on unemployment, inflation, and economic growth
- PO 7. how investment in factories, machinery, new technology, and the health, education, and training of people can raise future standards of living

- **4SS-P8. Describe the affects of international trade on the United States and other nations, with emphasis on:**

- PO 1. how people and nations gain through trade
- PO 2. how the law of comparative advantage leads to specialization and trade
- PO 3. the effects of protectionism, including tariffs and quotas on international trade and on a nation's standard of living
- PO 4. how exchange rates work and how they effect international trade
- PO 5. how the concepts of balance of trade and balance of payments are used to measure international trade
- PO 6. factors that influence the major world patterns of economic activity and economic connections among different regions, including changing alignments in world trade partners

- **4SS-P9. Apply an understanding of economics to personal financial choices, with emphasis on:**

- PO 1. how education, career choices, and family obligations affect future income
- PO 2. how advertising influences consumer choices
- PO 3. short- and long-term financial goals and plans, including income, spending, and saving
- PO 4. the advantages and disadvantages of using various forms of credit and how payment performance determines credit history
- PO 5. the risk, return, and liquidity of short- and long-term saving and investment strategies
- PO 6. investment options, including stocks, bonds, and mutual funds available to individuals and households

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **4SS-D1. Demonstrate an understanding of the principles of microeconomics at the college introductory level, with emphasis on:**
 - PO 1. basic economic concepts, including scarcity, the nature of economic systems, production possibilities, specialization, and comparative advantage
 - PO 2. analysis of product markets by manipulating the supply and demand model
 - PO 3. the costs, revenues, and profits of the individual firm, including marginal product and diminishing returns, average and marginal costs and revenues, and long-run costs and economies of scale
 - PO 4. comparison of product pricing and output for perfect competition, monopoly, monopolistic competition, and oligopoly
 - PO 5. evaluation of government policies toward monopoly behavior
 - PO 6. application of the concepts of supply and demand to markets for the factors of production, in particular how wages are determined
 - PO 7. the efficiency, equity, and role of government in a market economy
- **4SS-D2. Demonstrate an understanding of the principles of macroeconomics at the college introductory level, with emphasis on:**
 - PO 1. application of basic tools for measuring macroeconomic performance, including gross domestic product, price indexes, and unemployment rates
 - PO 2. analysis of national income and price determination using aggregate supply and aggregate demand
 - PO 3. the effects of monetary and fiscal policies on inflation, unemployment, and economic Growth
 - PO 4. analysis of economic policies that increase or decrease economic growth
 - PO 5. comparison of the Keynesian, monetarist, and rational expectation theories
 - PO 6. illustration of comparative advantage using inputs, outputs, and production-possibilities curves
 - PO 7. how monetary and fiscal policies affect exchange rates and how these exchange rates affect imports, exports, inflation, and employment.

APPENDIX

PHYSICAL GEOGRAPHY

Physical geography is the study of the natural processes that interact to produce the Earth's varying physical environments. These natural processes are subdivided into climate, landforms, biota (both plants and animals) and water – with the focus to develop an understanding of why places have particular physical characteristics. These physical geography processes are presented in Standard 4 (Life Science) and Standard 6 (Earth and Space Science) in Arizona's **Science Standards**. They are listed below, as they connect directly with and form the foundation for the rest of the geography standards.

PROFICIENCY (Grades 9-12)

Climate:

- 6SC-P2. Demonstrate an understanding of the Earth's tilt, rotation and revolution and their effects on the seasons and the length of days
- 6SC-P7. Investigate, analyze and evaluate the factors that may influence weather; describe their effects on the environment and daily activities on Earth

Landforms:

- 6SC-P3. Use the theory of plate tectonics to explain relationships among earthquakes, volcanoes, mid-oceanic ridges and deep sea trenches
- 6SC-P4. Use evidence (e.g., fossils, rock layers, ice cores, radiometric dating) to investigate how Earth has changed or remained constant over short and long periods of time

Biota:

- 4SC-P4. Describe and explain the cycling of matter and the flow of energy through the ecosystem's living and non-living components
- 4SC-P6. Describe and explain how the environment can affect the number of species and the diversity of species in an environment

Water:

- 6SC-P5. Identify, investigate and predict the factors that influence the quality of water and how it can be reused, recycled, and conserved
- 6SC-P6. Identify and compare the interactions between water and other Earth systems, including the biosphere, lithosphere, and atmosphere

SOCIAL STUDIES GLOSSARY*

Amendment (Constitutional) Changes in, or additions to, a constitution. Proposed by a two-thirds vote of both houses of Congress or by a convention called by Congress at the request of two-thirds of the state legislatures. Ratified by approval of three-fourths of the states.

Articles of Confederation The first constitution of the United States (1781). Created a weak national government; replaced in 1789 by the Constitution of the United States.

Balance of Payments A record of all economic transactions between the residents of a country and those of foreign countries for a one-year period. This includes the movement of goods (exports and imports), and also the flow of services and capital (e.g., purchases of tourists, investment income, gifts, pensions, and foreign aid).

Balance of Trade The difference between the total amount of exports and imports for a country in one year.

Barter The direct exchange of one good or service for another without the use of money.

B.C.E. and C.E. Before the Common Era (formerly known as B.C.) and Common Era (formerly known as A.D.).

Bicameral A legislative body composed of two houses.

Bill of Rights The first ten amendments to the Constitution. Ratified in 1791, these amendments limit governmental power and protect basic rights and liberties of individuals.

Bureaucracy Administrative organizations that implement government policies.

Business Cycle The periods of recession and expansion that an economy goes through because production does not increase continuously over time.

Cabinet Secretaries, or chief administrators, of the major departments of the federal government. Cabinet secretaries are appointed by the president with the consent of the Senate.

Capital Manufactured resources such as tools, machinery, and buildings that are used in the production of other goods and services (e.g., school buildings, books, tables, and chairs are some examples of capital used to produce education). This is sometimes called real capital.

Case Study The in-depth examination of an issue.

Checks and Balances The Constitutional mechanisms that authorize each branch of government to share powers with the other branches and thereby check their activities. For example, the president may veto legislation passed by Congress; the Senate must confirm major executive appointments; and the courts may declare acts of Congress unconstitutional.

Circular Flow Model A diagram showing how households, firms, and the government are interdependent. Circular flow of income diagrams are used to illustrate that there are several ways to measure national income flows.

Citizen A member of a political society who owes allegiance to the government and is entitled to its protection.

Civil Rights The protections and privileges of personal liberty given to all U.S. citizens by the Constitution and Bill of Rights.

Command Economy A type of economic system where the resources are state owned and their allocation and use is determined by the centralized decisions of a planning authority (e.g., the former Soviet Union).

Common or Public Good To the benefit, or in the interest, of a politically organized society as a whole.

Comparative Advantage The idea that countries gain when they produce those items that they are most efficient at producing.

Competitive Behavior When a business or individual acts in a self-interested way intending to increase wealth.

Concurrent Powers Powers that may be exercised by both the federal and state governments (e.g., levying taxes, borrowing money and spending for the general welfare).

Confederate Of, or pertaining to, a group of states more or less permanently united for common purposes.

Consumer A person or organization that purchases or uses a product or service.

Consumer Sovereignty The power consumers have in directing market economies because goods and services are produced and exchanged mostly to satisfy consumer wants.

Criminal Justice The branch of law that deals with disputes or actions involving criminal penalties. It regulates the conduct of individuals, defines crimes, and provides punishment for criminal acts.

Cultural Diffusion The adoption of an aspect (or aspects) of another group's culture, such as the spread of the English language.

Cultural Landscape The visual outcome of humans living in a place.

Culture The learned behavior of people, such as belief systems and languages, social relations, institutions, organizations, and material goods such as food, clothing, buildings, technology.

Deflation A general lowering of prices. The opposite of inflation.

Delegated Powers Powers granted to the national government under the Constitution, as enumerated in Articles I, II and III.

Demand How much a consumer is willing and able to buy at each possible price.

Democracy The practice of the principle of equality of rights, opportunity, and treatment.

Demographics The statistical data of a population (e.g., average age, income, education).

Developed Nation A country with high levels of well-being, as measured by economic, social, and technological sophistication.

Developing Nation A country with low levels of well-being, as measured by economic, social, and technological sophistication.

Diffusion The spread of people, ideas, technology and products between places.

Distribution The arrangement of items over an area.

Due Process of Law The right of every citizen to be protected against arbitrary action by government.

Eagle Feather A universal symbol among American Indian Nations embodying power, strength, and values.

Economic Growth An increase in an economy's ability to produce goods and services which brings about a rise in standards of living.

Ecosystem The interaction of all living organisms with each other and with the physical environment.

Emigration People leaving a country (or other political unit).

English Bill of Rights An act passed by Parliament in 1689 which limited the power of the monarch. This document established Parliament as the most powerful branch of the English government.

Entrepreneur A person who organizes, operates, and assumes the risk for a business venture.

Environment Everything near and on the Earth's surface. Natural or physical environment refers to climate, biosphere, hydrosphere, soil, and geology. Human or cultural environment refers to aspects of the environment produced by humans.

Equal Protection Clause The Fourteenth Amendment provision that prohibits states from denying equal protection of the laws to all people - that is, discriminating against individuals in an arbitrary manner, such as on the basis of race.

Equal Protection of the Law The idea that no individual or group may receive special privileges from, nor be unjustly discriminated by, the law.

Erosion The lowering of the land surface by physical processes such as flowing water, landslides, glacial ice, waves, and wind.

Exchange Rate The price of one currency in terms of another (e.g., pesos per dollar).

Ex Post Facto Law A law that makes criminal an act that was legal when it was committed. (Latin: "after the fact")

Federal Reserve System A system of 12 district banks and a Board of Governors that regulates the activities of financial institutions and controls the money supply.

Federal Supremacy Article VI of the Constitution providing that the Constitution and all federal laws and treaties shall be the "supreme Law of the Land." Therefore, all federal laws take precedence over state and local laws.

Federalism A form of political organization in which governmental power is divided between a central government and territorial subdivisions--in the United States, among the national, state, and local governments.

Federalist Papers A series of essays written by Alexander Hamilton, John Jay and James Madison that were published to support the adoption of the proposed United States Constitution.

Federalists Advocates of a strong federal government and supporters of the adoption of the U.S. Constitution.

Feudalism Political and economic system in which a king or queen shared power with the nobility, who required services from the common people in return for allowing them to use the noble's land.

Fiscal Policy How the government uses taxes and/or government expenditures to change the level of output, employment, or prices.

Foreign Policy Policies of the federal government directed to matters beyond U.S. borders, especially relations with other countries.

Founders People who played important roles in the development of the national government of the United States.

Framers Delegates to the Philadelphia Convention held in 1787, and those who wrote and ratified the Bill of Rights.

Free Enterprise The freedom of private businesses to operate competitively, for profit, and without government controls.

Freedom of Expression The freedoms of speech, press, assembly, and petition that are protected by the First Amendment.

Freedom of the Press Freedom to print or publish without governmental interference.

Geographic Grid A system to locate points on the Earth's surface (e.g., latitude and longitude).

Geographic Information System (GIS) A computer database that displays information like a map, but can do much more than just show patterns. A GIS database consists of "layers" of information about places (e.g., topography, vegetation, roads, buildings, sewers) that can be combined with a geographical perspective to solve societal problems.

Geographic Tool A device used to compile, organize, manipulate, store, report, or display geographic information, including maps, gazetteers, globes, graphs, diagrams, aerial photographs, satellite images, geographic information systems, and other computer databases and software.

Great Compromise An agreement made at the Constitutional Convention of 1787 that balanced the interest of the small and large states, resulting in the United States Senate being made up of two Senators from each state and a House of Representatives based on population.

Gross Domestic Product A measure of how much an economy produces each year, stated in the dollar value of final goods and services.

Human Capital The knowledge and skills that enable workers to be productive.

Human Characteristics The pattern that people make on the surface of the Earth, such as cities, roads, canals, farms, and other ways people change the Earth.

Immigration People moving to a country (or other political unit).

Impeachment The act of accusing a public official of misconduct in office by presenting formal charges against him or her by the lower house, with a trial to be held before the upper house.

Inalienable Rights Fundamental rights of the people that may not be taken away. A phrase used in the Declaration of Independence.

Incentive A benefit offered to encourage people to act in certain ways.

Inflation A general rise in the level of prices.

Initiative A form of direct democracy in which the voters of a state can propose a law by gathering signatures and having the proposition placed on the ballot.

Interdependence Reliance on people in other places for information, resources, goods, and services.

Isolationism The belief that the United States should not be involved in world affairs and should avoid involvement in foreign wars.

Judicial Review The doctrine that permits the federal courts to declare unconstitutional, and thus null and void, acts of the Congress, the executive, and the states. The precedent for judicial review was established in the 1803 case of *Marbury v. Madison*.

Justice Fair distribution of benefits and burdens, fair correction of wrongs and injuries, or use of fair procedures in gathering information and making decisions.

Land Use How people use the Earth's surface (e.g., urban, rural, agricultural, range, forest); often subdivided into specific uses (e.g., retail, low-density housing, industrial).

Landform A description of the Earth's shape at a place (e.g., mountain range, plateau, flood plain).

Latitude The angular distance north or south of the equator, measured in degrees along a line of longitude.

Legend The map key that explains the meaning of map symbols.

Liquidity The ease and speed with which something can be turned into cash (e.g., one can more quickly sell a common stock than a house; therefore, the stock is a more liquid asset than a house).

Longitude Angular distance east or west, almost always measured with respect to the prime meridian that runs north and south through Greenwich, England.

Loyal Opposition The idea that opposition to a government is legitimate. Organized opponents to the government of the day.

Macroeconomics The branch of economics which considers the overall aspects and workings of a national economy such as national output, price levels, employment rates, and economic growth.

Magna Carta Document signed by King John of England in 1215 A.D. that limited the king's power and guaranteed certain basic rights. Considered the beginning of constitutional government in England.

Marginal Analysis Making decisions based on the impact of the next dollar spent or the change one more unit would bring about. For example, when a person doesn't make an all-or-nothing decision to eat a bag of potato chips but decides, instead, chip-by-chip, or at the margin, whether to eat another one.

Market Economic System A system in which most resources are owned by individuals and the interaction between buyers and sellers determines what is made, how it is made, and how much of it is made.

Market Price The price at which the quantity of goods and services demanded by consumers and the quantity supplied by producers are the same. This is sometimes called the equilibrium price.

Market Any setting in which exchange occurs between buyers and sellers.

Mayflower Compact The document drawn up by the Pilgrims in 1620, while on the Mayflower, before landing at Plymouth Rock. The Compact provided a legal basis for self-government.

Mercantilism An economic and political policy in which the government regulates the industries, trade, and commerce with the national aim of obtaining a favorable balance of trade.

Microeconomics The branch of economics concerned with the decisions made by individuals, households, and firms and how these decisions interact to form the prices of goods and services and the factors of production.

Monarchy A type of government in which political power is exercised by a single ruler under the claim of divine or hereditary right.

Monetary Policy Management of the money supply and interest rates to influence economic activity.

National Security Condition of a nation's safety from threats, especially threats from external sources.

Natural Hazard A process taking place in the natural environment that destroys human life, property, or both (e.g., hurricane, flooding).

Opportunity Cost The value of the next best alternative that must be given up when a choice is made (e.g., the opportunity cost of studying on a Saturday night is the fun you are missing by not going to the dance).

Price Ceilings Government policy which prevents the price of a good or service from exceeding a particular level (e.g., rent control or the price of gasoline during the 1970's).

Principle A basic rule that guides or influences thought or action.

Producers People who change resources into an output that tends to be more desirable than the resources were in their previous form (e.g., when people produce French fries, consumers are more inclined to buy them than the oil, salt, and potatoes individually).

Production Possibilities Curve The different combinations of various goods that a producer can turn out over a given period, given the available resources and existing technology.

Progressive Tax A tax structure where people who earn more are charged a higher percentage of their income (e.g., the federal income tax).

Projection A mathematical formula by which a geographic grid (and the shapes of land and water bodies) can be transferred from a sphere to a flat surface (e.g., a map or geographic information system).

Property Rights The rights of an individual to own property and keep the income earned from it.

Proportional Tax A tax structure where all people pay about the same percentage of their incomes in taxes (e.g., a flat rate tax).

Protectionism The practice of protecting domestic industries from foreign competition by imposing import duties or quotas.

Public Service Service to local, state, or national communities through appointed or elected office.

Quota A limit on how much of a good can be imported. The limit is set either by quantity or by the dollar value.

Ratify To confirm by expressing consent, approval, or formal sanction.

Referendum A form of direct democracy in which citizens of a state, through gathering signatures, can require that a legislative act come before the people as a whole for a vote. The process also allows the legislature to send any proposal for law to the people for a vote.

Region A larger-sized territory that includes many smaller places, all or most of which share similar attributes, such as climate, landforms, plants, soils, language, religion, economy, government or other natural or cultural attributes.

Regressive Tax A tax structure where people who earn more pay a smaller percentage of their income in taxes (e.g., sales taxes).

Representative Democracy A form of government in which power is held by the people and exercised indirectly through elected representatives who make decisions.

Republican Government A system of government in which power is held by the voters and is exercised by elected representatives responsible for promoting the common welfare.

Resources Land, labor, capital, and entrepreneurship used in the production of goods and services. A part of the natural environment that people value, such as soil, oil, iron or water.

Return How well you do by investing in one asset as opposed to another (e.g., if you buy a house in an up-and-coming neighborhood, you expect a better return when you sell it than if you buy a house next to where a new freeway is going to be built).

Revolution A complete or drastic change of government and the rules by which government is conducted.

Risk How much uncertainty accompanies your choice of investment (e.g., if you lend money to someone who has just escaped from prison, you are taking more of a risk than if you lend money to your mother).

Rule of Law The principle that every member of a society, even a ruler, must follow the law.

Scale The relationship between a distance on the ground and the distance on the map. For example, the scale 1:100,000 means that one unit of distance (e.g. an inch or millimeter) on the map equals 100,000 of these units on the Earth's surface.

Scarce A good or service that is insufficient in quantity to satisfy the demand or need for it.

Separation of Powers The division of governmental power among several institutions that must cooperate in decision making.

Sovereignty The ultimate, supreme power in a state (e.g., in the United States, sovereignty rests with the people).

Spatial Pertaining to distribution, distance, direction, areas and other aspects of space on the Earth's surface.

Specialization When a business focuses on producing a limited number of goods and leaves the production of other goods to other businesses. Specialization also describes how each person working to produce a good might work on one part of the production instead of producing the whole good (e.g., in a shoe factory one person cuts the leather, another person sews it, another glues it to the sole).

Standard of Living The overall quality of life that people enjoy.

Suffrage The right to vote.

Supply The quantity of a product or service a producer is willing and able to offer for sale at each possible price.

Tariff A tax on an imported good.

Thematic Map A map showing the distribution (or statistical properties) of cultural or natural features, such as a thematic map of unemployment or a thematic map of rainfall.

Theocracy Any government in which the leaders of the government are also the leaders of the religion and they rule as representatives of the deity.

Totalitarianism A centralized government that does not tolerate parties of differing opinion and that exercises dictatorial control over many aspects of life.

Treaty A formal agreement between sovereign nations to create or restrict rights and responsibilities. In the U.S., all treaties must be approved by a two-thirds vote in the Senate.

Unitary Government A government system in which all governmental authority is vested in a central government from which regional and local governments derive their powers (e.g., Great Britain and France, as well as the American states within their spheres of authority).

United Nations An international organization comprising most of the nations of the world, formed in 1945, to promote peace, security, and economic development.

Urbanization The process whereby more people live and work in cities.

Voluntary Exchange Trade between people when each one feels he or she is better off after the trade (e.g., if you sell your old exercise bike for cash, you gain because you would rather have the cash than the bike, but the other person gains because he or she would rather have the bike than the cash).

Technology Standards 2000

Proficiency (Grades 9-12)

Technology Education Standards Rationale

Technology encompasses the tools and strategies for solving problems, using information, increasing productivity and enhancing personal growth. The word *technology* summons an image of a variety of tools ranging from shovels to gene splitters. When asked to develop the original Technology Standards, adopted in 1997, the Committee did so without the benefit of seeing the integration of various technologies into other curricular standards. Over the past four years, significant advances in technology have occurred. These changes have caused many national organizations to review what students need to know and be able to do in relation to technology. Therefore, when asked to review the current standards, the Revision Committee examined national standards (National Educational Technology Standards, Information Power, Information Technology in Education and Technology for All Americans), along with current Arizona standards. The Revision Committee also analyzed current research on technology skills important to business and industry. The Revision Committee reviewed technology that is currently integrated into other content area standards with the vision that as other standards are revised, technology will be seamlessly integrated.

The goal is to help students live, learn and work successfully and responsibly in an increasingly complex, technology-driven society. These Technology Standards are designed to provide foundational skills and processes that students need in order to work productively and creatively in their studies, at work and at home. Research on the transfer of learning strongly supports the position that instruction and educational activities should closely parallel the final desired behavior. It is essential that technology instruction be an integral part of a student's educational experience. Education's role is to help students meet the challenge of the future. Arizona must encourage, assist and provide all students with the required tools and instruction to enable them to acquire knowledge, develop skills and apply these tools successfully in our world.

The following definition of technology is supported in this document:

Technology is the application of tools to solve problems that extend human potential for the benefit of society

Table 1: Technology Education Standards

STANDARD 1: Fundamental Operations and Concepts

Students understand the operations and function of technology systems and are proficient in the use of technology.

STANDARD 2: Social, Ethical and Human Issues

Students understand the social, ethical and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information and software.

STANDARD 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity and to construct technology-enhanced models, prepare publications and produce other creative works.

STANDARD 4: Technology Communications Tools

Building on productivity tools, students will collaborate, publish, and interact with peers, experts and other audiences using telecommunications and media.

STANDARD 5: Technology Research Tools

Students utilize technology-based research tools to locate and collect information pertinent to the task, as well as evaluate and analyze information from a variety of sources.

STANDARD 6: Technology as a Tool for Problem Solving and Decision-making

Students use technology to make and support decisions in the process of solving real-world problems.

TECHNOLOGY EDUCATION STANDARDS
BY LEVEL: PROFICIENCY (Grades 9-12) and DISTINCTION (Honors)

STANDARD 1: FUNDAMENTAL OPERATIONS AND CONCEPTS

Students understand the operations and function of technology systems and are proficient in the use of technology.

(Proficiency Grades 9-12)

- **1T-P1. Use the appropriate technology device to complete a task**

*See: Mathematics (3M-P1 and P3, 4M-P2)**

PO 1. Given a task, select the appropriate technology device(s) (e.g., reporting a news story using digital and video camera and online editing to publish on the Web; gathering data using scientific probes and graphing calculators)

- **1T-P2. Make informed choices among technology systems, resources and services**

See: Arts {Music} (1AM-P10) and Language Arts (VP-P)

PO 1. Create criteria to compare and contrast technology systems, resources and services (e.g., which Internet service provider, music system, Web browser or graphics package meets criteria)

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **1T-D1. Manage a complex technology system such as a local area network, video distribution of a school, or lighting for a production**

See: Arts {Theatre} (1AT-D4, D8-9)

- **IT-D2. Set up and manage a homework hotline, tutoring site, discussion group, threaded discussion and/or e-mail system for students and parents**

* The use of cross-references to the other Arizona Academic Standards is intended to emphasize that technology is seen as an **integrated** component of the educational and learning process. Teachers may find additional opportunities for integrating the Technology Standards with other academic standards.

STANDARD 2: SOCIAL, ETHICAL AND HUMAN ISSUES

Students understand the social, ethical and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information and software.

(Proficiency Grades 9-12)

- **2T-P1. Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services**

See: Arts {Music} (2AM-P3) and Social Studies (ISS-P1, PO2)

- PO 1. Make informed choices among technology systems, resources and services in a variety of contexts
- PO 2. Explain the impact computer networking has on an organization (e.g., cost, allocation of resources, security, productivity, communications, and organizational or societal change)
- PO 3. Predict future technological advances and the impact of them for individuals and the workplace (e.g., given the current “instant access,” what’s next?)

- **2T-P2. Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole**

See: Comprehensive Health (4CH-P2), Science (3SC-P3), Social Studies (ISS-P1, PO1-2) and Workplace Skills (7WP-P2)

- PO 1. Explain the cost of maintaining technology in terms of money and manpower
- PO 2. Describe the effect on an organization when technology fails (e.g., power outage)
- PO 3. Analyze the long-term impact of technologies and their obsolescence (e.g., on the preservation of, and access to, older technologies; responsible disposal of old technologies; retraining of workforce)

- **2T-P3. Demonstrate legal and ethical behaviors among peers, family, and community regarding the use of technology and information**

See: Social Studies (2SS-P8, PO2 and PO4-6)

- PO 1. State personal liability issues related to security systems to protect technologies (e.g., use of passwords and the importance of protecting them; use of encryption software)
- PO 2. Discuss individual privacy issues versus First Amendment protection (e.g., federal and state filtering and access legislation)
- PO 3. Explain the impact of unauthorized intrusions (i.e., hacking, spamming, manipulating or deleting data) on society
- PO 4. Describe computer viruses and ways to protect computers from them

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **2T-D1. Analyze current changes in technologies and predict the effect those changes have on the workplace and society**

See: Comprehensive Health (4CH-D1) and Science (3SC-D1)

- **2T-D2. Advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information**

See: Comprehensive Health (4CH-D1, 5CH-D1) and Science (4SC-D1 and D2)

STANDARD 3: TECHNOLOGY PRODUCTIVITY TOOLS

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications and produce other creative works.

(Proficiency Grades 9-12)

- **3T-P1. Communicate to a variety of audiences using professional level technology tools**

See: Mathematics (2M-P2), Science (5SC-P3-4) and Social Studies (4SS-P2, PO1-2)

- PO 1. Create documents using professional format (e.g., résumé, letter of application, electronic portfolio, research paper)
- PO 2. Merge information from one document to another (e.g., mail merge, publish and subscribe)
- PO 3. Create a document that utilizes hyperlinks (e.g., Web link in documents, linking a word to a glossary, creating an interactive index)

- **3T-P2. Use a variety of technology tools for data collection and analysis to support a decision**

See: Arts {Theatre}(1AT-P6), Mathematics (2M-P2, 3M-P3) and Social Studies (1SS-P1, PO2)

- PO 1. Select appropriate technology devices to collect and record data (e.g., science probe, graphing calculator, PDA {personal digital assistant}, alternative keyboard, webcam, GPS and Internet)
- PO 2. Create and use a spreadsheet to analyze variables (e.g., 12-month budget, loan rates, science and math experiments, and investment portfolios)
- PO 3. Analyze data and create a database report from information manipulated in a variety of ways to support decisions (e.g., census data, polls and surveys, annual report)

- **3T-P3. Use technology tools to publish and present information with interactive features**

See: Mathematics (2M-P7, 4M-P2) and Science (5SC-P2 and P6, 6SC-P1)

PO 1. Design and create a multimedia presentation or Web site with interactive features (e.g., animation, sound, action buttons to play, video, control devices, open other applications, link to a Web site)

- **3T-P4. Use technology tools to support modeling and system analysis**

See: Science (3SC-P2) and Workplace Skills (6WP-P3)

PO 1. Manipulate several variables in a computer simulation to reach a desired outcome (e.g., simulation software, Web-based simulation, textbook support software)

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **3T-D1. Demonstrate technical standards, practices and techniques in videography by creating a product**

See: Arts {Theatre} (1AT-D4-6)

STANDARD 4: TECHNOLOGY COMMUNICATIONS TOOLS

Building on productivity tools, students will collaborate, publish, and interact with peers, experts and other audiences using telecommunications and media.

(Proficiency Grades 9-12)

- **4T-P1. Routinely and efficiently use online information resources to meet needs for collaboration and communications**

See: Language Arts (W-P2-6) and Workplace Skills (1WP-P5)

PO 1. Using criteria for research in Standard 5, create an end product (e.g., multimedia presentation, publication, Web page) to disseminate the information

- **4T-P2. Manage and communicate personal and professional information utilizing technology tools and resources**

See: Language Arts (W-P2-6) and Workplace Skills (7WP-P1, 1WP-P3)

PO 1. Plan and present a product appropriate to the task

- **4T-P3. Using technology, collaborate with peers, experts, and others to contribute to a content-related knowledge base**

See: Workplace Skills (1WP-P3-6 and P9, 4WP-P1)

PO 1. Contribute digitized material (e.g., video interviews, scanned pictures, text, and graphic information) to a project archive and create links to resource material

PO 2. Conduct e-mail interviews with content experts

PO 3. Consider several methods and choose the best for building group collaboration in research, communication and presentation among students in physically separated schools

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **4T-D1. Use technology to compile, synthesize, produce, and disseminate information, models, and other creative works**

See: Language Arts (LS-D) and Workplace Skills (1WP-D4)

- **4T-D2. Participate in a student think-tank simulation to solve a technology-based problem**

See: Workplace Skills (1WP-D5, 4WP-D1)

STANDARD 5: TECHNOLOGY RESEARCH TOOLS

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of sources.

Note: The performance objectives described in Standard 5 rely upon the mastery of skills and understanding of concepts from Standards 1-4 of this document

(Proficiency Grades 9-12)

- **5T-P1. Develop a research strategy to find accurate, relevant, appropriate electronic information sources**

See: Arts {Theatre} (2AT-P1), Language Arts (W-P4), Mathematics (2M-E1, PO 1), Social Studies (1SS-P2, PO1 and PO3) and Workplace Skills (7WP-P1)

- PO 1. Explain the difference between Internet searching using directories and search engines
- PO 2. Construct online or electronic database searches using Boolean logic (AND, OR, NOT)
- PO 3. Independently select appropriate electronic resources from school, community and the world (via online) to be used to locate information needed when presented with a problem to solve
- PO 4. Evaluate the appropriateness and effectiveness of electronic resources (e.g., purpose, credibility of author)

- **5T-P2. Investigate and apply expert systems (e.g., search engines and intelligent agents)**

See: Arts {Theatre} (2AT-P1) and Workplace Skills (1WP-P9, P10)

- PO 1. Given a concept, use online search engines as well as resource-specific search features (e.g., CD-ROMs) to find relevant information
- PO 2. Adapt software for personal efficiency by setting preferences for effective use of the software
- PO 3. Use advanced features (e.g., preferences, advanced searching, filtering) in Internet browser and information software

- **5T-P3. Present research findings from electronic resources using academic models for citations and format**

See: Workplace Skills (1WP-P10, 2WP-P2)

- PO 1. Utilize evaluation criteria (authority, accuracy, relevancy, timeliness) for information found on the Internet to present research findings
- PO 2. Create citations for resources used following an academic model to present research findings

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **5T-D1. Design a research project using a variety of technologies to solve a real-world problem**
See: Language Arts (W-D1)
- **5T-D2. Evaluate the accuracy, relevance, appropriateness, comprehensiveness and bias of electronic information sources**

See: Arts {Theatre} (2AT-D2)

PO 1. Compare and contrast bias in electronic information resources

PO 2. Create a presentation on bias found in electronic information resources to present to a younger audience (*See Technology 5T-E2, PO4*)

STANDARD 6: TECHNOLOGY AS A TOOL FOR PROBLEM SOLVING AND DECISION-MAKING

Students use technology to make and support decisions in the process of solving real-world problems.

Note: Problem solving is inherent in all disciplines. Technology Standard 6 is designed to provide a cumulative (capstone) experience

See: Science 3SC in its entirety and Workplace Skills 3WP in its entirety

(Proficiency Grades 9-12)

- **6T-P1. Investigate technology-based options, including distance and distributed education for lifelong learning**

See: Workplace Skills (1WP-P9)

PO 1. Locate and use an online tutorial and discuss the benefits and disadvantages of this method of learning

PO 2. Research a career and predict the advanced training needed to maintain success in the career

PO 3. Design and implement a personal learning plan that utilizes technology (e.g., identify a topic such as an academic interest, personal hobby, health issue, or potential job sources, and utilize research skills from Standard 5 to support lifelong learning)

- **6T-P2. Routinely and ethically use productivity tools, communication tools and research skills to solve a problem**

See: Mathematics (2M-P7-8)

PO 1. As a capstone experience in a content area, solve a problem using appropriate technology tools to:

- a) identify the problem and formulate the strategy to solve the problem (e.g., brainstorming tools, flowcharting, online resources)
- b) collect data (e.g., using GPS, PDA {personal digital assistant}, Internet, probeware, recordings)
- c) interpret data (e.g., visualization, simulation, or modeling software)
- d) develop a solution to the problem
- e) present findings (e.g., electronic presentation, Web page, professionally formatted document, computer model, audio or video presentation, Web streaming)

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **6T-D1. Collaborate with peers, experts and others to compile, synthesize, produce and disseminate information and models for the purpose of suggesting solutions to a complex problem**

See: Science (1SC-D1)

TECHNOLOGY EDUCATION STANDARDS GLOSSARY

Acceptable Use Agreement/Policy (AUA or AUP)

A form that is signed by an individual, and when appropriate, legal guardian/parent, that acknowledges responsible behavior and use for the technology provided by the district, including the legal implications of the use of the Internet.

Adaptive Devices

Devices that help people with visual impairments, hearing losses, severe speech impairments, physical disabilities and/or severe learning disabilities cope with demands that are placed upon them from their environment. (See also Assistive Technology)

Assistive Technology

Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain or improve the functional capabilities of children with disabilities. (Federal Register, August 19, 1991, p. 41272.) (See also Adaptive Devices)

Alternative Keyboard

A self-contained word processing device with full-size keyboard and memory that allows editing, printing or direct transfer to a computer for storage and manipulation (brand names, e.g., AlphaSmart, Dream Writer).

Bit

A contraction of binary digit. It is the smallest unit of storage in a computer. The bit is represented by a zero (0) or one (1) for information; instructions and data may be represented by sets of bits. Compare byte.

Bookmark

A marker that allows a user to identify a site on the Internet to allow rapid access. Also, a marker that allows a user to mark a place in a word processing document.

Boolean (also Boolean Operator)

A system of logic that, when applied to searches, modifies search terms with the “operators” AND, OR and NOT. Boolean operators allow you to broaden or narrow the range of your search.

Browser

An application that allows people to scan and interact with a network. Netscape and Internet Explorer are examples of browsers.

Byte

A set of bits, typically eight, that comprises the smallest accessible unit in computer memory. It is the equivalent of one letter or one digit from 0 to 9.

CD (Compact Disc - Player/Reader)

A device attached to a computer that provides access to information such as encyclopedias, dictionaries, databases or music. These are devices that allow users to store or write to a CD.

CD-ROM (Compact Disc – Read Only Memory)

A CD-ROM format used to store large amounts of information. A flat round disc that is used to store digital data. The disc is read by a laser. You can only read information on a CD. You cannot record information on a CD.

Click

To press and release a mouse or trackball button once while the cursor is stationary.

Clip Art

Graphics that can be cut and pasted electronically into documents. Clip art can be photographs, diagrams, maps, illustration or cartoons.

Clipboard

A special file or memory area (buffer) where data is stored temporarily before being copied to another location. In Microsoft Windows and the Apple Macintosh operating systems, the Clipboard can be used to copy data from one application to another. The Macintosh uses two types of clipboards. The one it calls the Clipboard can hold only one item at a time and is flushed when you turn the computer off. The other, called the Scrapbook, can hold several items at once and retains its contents from one working session to another.

Copyright guidelines

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CPU (Central Processing Unit)

The CPU is the brains of the computer. Sometimes referred to simply as the processor or central processor, the CPU is where most calculations take place. In terms of computing power, the CPU is the most important element of a computer system.

Cropping

Used in computer graphics, cropping is a method used to cut off the sides of an image to make it the proper size or to remove unwanted parts. Most graphics applications allow you to crop images with a clip feature.

Cut

- 1) removes highlighted item and places a copy of it on the clipboard.
- 2) A process of replacing a video picture with another instantaneously, or making an abrupt change of image or sound.

Database

A collection of data arranged into categories. These can then be manipulated by the user to create reports.

Delete

Removing a character, word, line, paragraph or other specified amount of text from a document.

Digital Camera

A hardware product that captures an image and sends it to a computer.

Digital Photo

An image that is stored in bits and bytes on a computer. It can be manipulated and displayed on a computer screen.

Disc

A term used when referring to a compact disc or laser disc on which information is stored optically.

Disk

Media that stores computer information. There are two basic types: hard disks (or drives) and floppy disks.

Document

A file created by a program.

Drag

To hold down a mouse button while moving the mouse. It is a way to move objects, resize borders and objects or select text in blocks.

Drive

Any device that reads and writes information, such as a hard drive, floppy drive, CD ROM drive or tape drive.

Drawing Tools/Program

Software used to create any type of drawing, from a simple line sketch to a magnificent full-color poster. Drawing programs are used by graphic artists and designers.

E-mail (Electronic Mail)

The electronic transmission of letters, documents, messages and memos from one computer to another over a network.

Electronic Card Catalog

A computer-based version of the traditional library card catalog. A patron uses a computer to type in or select pre-determined search strategies to access items in a library's holdings.

Encryption Software

Encryption software puts data into a secret code so it is unreadable, except by authorized users. The most common form is public encryption, which is a way of encrypting messages in which each user has a public key and a private key. Messages are sent encrypted with the receiver's public key; the receiver decrypts them using the private key. Using this method, the private key never has to be revealed to anyone other than the user.

Enter Key/Return Key

A key located at the right end of the third row from the bottom on a keyboard. Pressing the Enter key performs a typed or highlighted command. In word processing, the Enter key starts a new paragraph.

Erase Disk

On the Macintosh, the term for formatting or initializing a disk.

Ergonomics

Science of body positioning to reduce physical, mental and emotional stress on the individual.

Ethernet

The most commonly used technology for networking computers.

Fair Use Guidelines

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Filter

A device or program that separates data or signals in accordance to specific criteria. Currently, educational institutions are required to have some form of filter between students and the Internet. Compare to firewall.

Firewall

A system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both, and are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet, especially intranets. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria. There are several types of firewall techniques: packet filters, application gateways, circuit-level gateways and proxy servers.

FireWire

Industry standard. A “bus” (device) that can move large amounts of data between computers and peripheral devices. Manufacturers of multimedia devices use this technology because it speeds up the movement of multimedia data and large files, and enables the connection of digital devices (e.g., digital camcorders, digital video tapes and music systems) directly to a personal computer.

Floppy Disk Drive

A device used to write and read data to a floppy disk and transfer the information to the computer’s memory.

Floppy Disk

A 3.5 inch removable disk that’s flexible (although it’s protected by a hard plastic case). Also called a diskette. Compare disk.

Flow chart

A flow chart is a graphical representation of a computer program or order of operations. The process of flow charting includes defining the project, determining the steps in the project, creating a graphical representation, and testing assumptions about the project (or process).

Folder

In graphical user interfaces such as Windows and the Macintosh environment, a folder is an object that can contain multiple documents. Folders are used to organize information.

Font

A single style of typeface and size (e.g., Times New Roman, 12pt).

Format/Formatting

- 1) (noun) The layout, presentation or arrangement of data on a screen or paper.
- 2) (verb) The process whereby a disk is made ready for storing data by organizing the surface into tracks and sectors. Synonymous with initialization. Compare Erase Disk.

FTP (File Transfer Protocol)

A method of transferring files between computers connected to the Internet.

GPS (Global Positioning System)

A system of satellites that transmit continually, which make it possible to identify each location through a receiving unit, by triangulation.

Graphic Calculator

A calculator that allows the user to program in a formula to present data visually in graph or chart form.

Graphic Organizer

Software that visually organizes the thought or creative process. Also known as storyboard software, these combine both icons (graphics) and text to give structure and logic to a project or presentation.

GUI (Graphical User Interface)

A program interface that takes advantage of the computer's graphics capabilities to make the program easier to use.

Hacking

Attempts to gain unauthorized entry into a computer system or network.

Hard Drive

The primary storage device for your computer. Also called hard disk. It is where applications, utilities and files are stored.

HTML (HyperText Markup Language)

A programming language for creating pages on the World Wide Web.

Hyperlink, Hypermedia, Hyperstack

Hyper – multi-dimensional. Media – text, graphics, sound, animation and video.

Hypermedia was originally coined to describe how different forms of information can be linked in a non-linear fashion. Users move from one group of information to another by clicking on text or graphics on a computer screen. These “hyperlinks” allow users to individualize the way they move through and process the information being presented to them.

Initialization

The process whereby a disk is made ready for storing data by organizing the surface into tracks and sectors. Synonymous with formatting. Compare Erase Disk.

Input Device

A machine through which data and instructions are entered into the computer's main memory. A mouse, a graphics tablet, and detachable keyboards are examples of input devices.

Intelligent Agents

Programs, used extensively on the Web, that perform tasks such as retrieving and delivering information and automating repetitive tasks. Agents are designed to make computing easier. Currently they are used as Web browsers, news retrieval mechanisms and shopping assistants. By specifying certain parameters, agents will "search" the Internet and return the results directly back to the user's PC. Some intelligent agents are also used as tools to track Web behavior; they can even "watch" as the user surfs the 'Net and record how often he/she visits a certain site. Later, they can be used to automatically download the user's favorite sites, letting the user know when a favorite site has been updated, and even tailoring specific pages to suit the user's tastes.

Interactive

Refers to an application or system that provides information in response to the user's input.

Internet

A global communications network that is a collaborative effort among educational institutions, government agencies, various commercial and nonprofit organizations, and individual users. The Internet allows three primary functions: communications (e-mail and news), retrieval of information and transferring files (FTP).

Intranet

The term used for the implementation of Internet technologies (communications protocol/mail/file transfer/Web browsing/user interfaces/terminal emulation) within an organization, to enhance the organization's operation, efficiency, and development by providing all organizational resources to each employee's desktop with minimal cost and time. Intranets connect the different types of computers on a network, thus providing for open standards which allows flexibility.

Keyboard

The main input device for computers. Keyboards are derived from the typewriter but have additional keys that enhance their function.

Keyword Searching

A keyword is a predefined word or set of words that identifies a specific record or document. A keyword search uses these keywords to locate information in a database or on the Internet.

LAN (Local Area Network)

Programs, storage and graphic devices at multiple computer workstations over relatively small geographic areas for rapid communication. Compare WAN.

Menu

A list of commands or options from which choices are made. Most applications now have a menu-driven component.

Merge

In word processing, when information from a table or database is inserted into a document. In a spreadsheet, the combining of more than one cell to create a single cell.

Monitor

A screen used to display the data received from a processor, or data transmitted to the processor. A computer monitor does not have facilities to receive broadcast signals or process sound. A video monitor can receive broadcast signals and process sound.

Mouse

A pointing device for moving the cursor on the screen.

Netiquette

The rules of etiquette on the Internet.

Network

A collection of computers that are linked together for the purpose of sharing information.

OCR (Optical Character Recognition)

OCR involves reading text from paper and translating the images into a form that the computer can manipulate (for example, into ASCII codes). An OCR system enables the scanning of a book or a magazine article, feeding it directly into an electronic computer file, and then editing the file using a word processor.

Online

A common term used to refer to being connected to the Internet.

Output Device

A peripheral through which information from the computer is communicated to the outside world; for example, a display screen, printer or speakers.

Password

A code word of letters and/or numbers that allows a user to gain access to a secured system or piece of information. Compare to PIN.

Paste

A command that inserts text or graphics from the clipboard to the document at the location of the cursor. Requires that an item first be placed on the clipboard using Copy or Cut commands.

Peripheral

A device that can communicate directly with a computer, such as printers, scanners, cameras, CD-ROMs and laserdisc players.

PDA (Personal Digital Assistant)

A pocket-sized personal computer. PDAs usually can store phone numbers, appointments, and to-do lists. Some PDAs have a small keyboard, others have only a special pen that is used for input and output. A PDA can also have a wireless fax modem. Files can be created on a PDA which are later entered into a larger computer.

PIN (Personal Identification Number)

A privileged code that allows a user to gain access to a secured system or piece of information. May be assigned by the system operator or selected by the user. Compare Password.

Point and Click

A method of interacting with a computer using the mouse. The user moves a cursor on the screen based on the corresponding movement of the mouse. When the mouse is over the desired graphic or text on the computer screen, the mouse button is pressed or “clicked” to start a desired action.

Port

An interface on a computer used to connect a device. Personal computers have various types of ports. Internally, there are several ports for connecting disk drives, display screens and keyboards. Externally, personal computers have ports for connecting modems, printers, mice and other peripheral devices.

Preference

The selecting of one thing over another. In computer terms, it is a section of the operating system or software application that can be set as a “default.”

Presentation Device

One of several devices that can be connected to a computer to display information to an audience. The most common devices are video projection units and video converters for television monitors.

Probe/Probeware

Probe: A variety of devices that can be connected to a computer or graphing calculator to collect data.

Probeware: The software that allows the probe or probes to interface with the computer or calculator.

RAM (Random Access Memory)

Memory used to run the operating system and applications in a computer. The more RAM a computer has, the more applications it can run simultaneously. The operating system and other software are *stored* on the computer's hard disk, but they *run* in RAM. Data stored in RAM is lost when the computer is turned off.

Remote Control

A wireless device used to control a piece of electronic equipment such as a television, tape or CD player, stereo or video camera.

ROM (Read Only Memory)

System memory not available to user, but used by the operating system. This memory is programmed only once by the manufacturer and cannot be changed.

Scanner

A device for converting text or graphics displayed on a sheet of paper into a digital image you can display on your computer screen and use with certain applications.

Scientific Probe/Science Probe

See probe/probeware

Search Engines

A program that searches documents for specified keywords and returns a list of the documents where the keywords were found. Although *search engine* is really a general class of programs, the term is often used to specifically describe systems like Alta Vista and Excite that enable users to search for documents on the World Wide Web and USENET newsgroups. Typically, a search engine works by sending out a spider to fetch as many documents as possible. Another program, called an indexer, reads these documents and creates an index based on the words contained in each document. Each search engine uses a proprietary algorithm to create its indices such that, ideally, only meaningful results are returned for each query.

Serial

One-by-one. Serial data transfer refers to transmitting data one bit at a time. The opposite of serial is parallel, in which several bits are transmitted concurrently.

Server

A computer that provides shared, centralized resources (such as files, e-mail, databases, modems and printers) to other computers on the network.

Simulation

An electronic imitation. SimCity is a game in which a simulation of a real city is created on a computer.

Software

The instructions that tell a computer what to do.

Sort

To place, separate or arrange according to common characteristics.

Spam

Unsolicited, unwanted junk e-mail with wide distribution.

Spell Check

A feature built into many applications that allows the user to check for spelling errors or look for synonyms.

Spreadsheet

Spreadsheets applications (sometimes referred to simply as spreadsheets) are computer programs that let you create and manipulate spreadsheets electronically. In a spreadsheet application, each value sits in a cell. Data can be defined in each cell and how different cells depend on one another. The relationships between cells are called formulas, and the names of the cells are called labels.

Streaming (Web Streaming)

Playing audio or video immediately as it is downloaded from the Internet, rather than storing it in a file on the receiving computer first. Streaming is accomplished by way of Web browser plug-ins, which decompress and play the file in real time; a fast computer and fast connection are necessary.

TCP-IP (Transmission Control Protocol/Internet Protocol)

The suite of communications “rules” used to connect hosts on the Internet.

Text

The letters or words of a written work.

Text Support Software

Materials available from a textbook publisher that support, supplement or replace print content for students. These may be on-line, in disk or CD-ROM format.

Text Wrap

A feature supported by many word processors that enables you to surround a picture or diagram with text. The text wraps around the graphic. Text wrap is also called text flow.

Undo

A command within many applications that reverses the most recent thing you did in the application.

URL (Uniform Resource Locator)

The global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located.

USB (Universal Serial Bus)

A personal computer bus which can support up to 127 peripheral devices in a daisy chain configuration, and has a total bandwidth of 1.5 megabytes per second. It uses inexpensive cable, which can be up to 5 meters long.

VCR

An analog video tape player and recorder which is usually connected to a television monitor to record or play tapes. One-half inch (1/2") video tape is the most commonly used format

Video

A visual recording of information.

Videoconferencing

Conducting a conference between two or more participants at different sites by using computer networks to transmit audio and video data. For example, a *point-to-point* (two person) videoconferencing system works much like a video telephone. Each participant has a video camera, microphone and speakers mounted on his/her computer. As the two participants speak to one another, their voices are carried over the network and delivered to the other's speakers and whatever images appear in front of the video camera appear in a window on the other participant's monitor. *Multipoint* videoconferencing allows three or more participants to sit in a virtual conference room and communicate as if they were sitting right next to each other.

Visualization

A variety of software packages that allows students to create a model of a real world system. These models are often three-dimensional in nature.

Virus

A program that infects and replicates itself in computer files, spreading from computer to computer. Some viruses can be relatively harmless, simply displaying a message on the screen. Other viruses can be extremely damaging, crashing the hard drive so all data is lost.

WAN (Wide Area Network)

A network that spans geographically separated areas, usually by using models and dedicated, high-speed telephone lines. Compare LAN.

Web Page

One page of a document on the World Wide Web. A Web page is usually a file written in Hypertext Markup Language (HTML), stored on a server. A Web page usually has links to other Web pages. Each Web page has its own address called a Uniform Resource Locator (URL) in the form: <http://www.name.com/directory/page.htm>.

Web Site

A site (location) on the World Wide Web. Each Web site contains a home page, which is the first document users see when they enter the site. The site might also contain additional documents and files. Each site is owned and managed by an individual, company or organization.

Wizard

A Microsoft term for pre-designed elements of a software package. Will “ask questions” and assist in the design of a document. For example, a “letter wizard,” within a word processing application, would lead the user through the steps of producing different types of correspondence. (May also refer to an outstanding programmer or a system administrator.) Compare to Assistant in Macintosh.

Word Processor

Software that allows you to enter, edit and format text. Some software will allow the use of graphics.

Web or WWW (World Wide Web)

A global hypertext network that is part of the Internet. It is normally viewed through a browser that provides a Graphical User Interface.

Note: Many of these definitions were found at <http://webopedia.internet.com>

Workplace Skills 1997

Proficiency (Grades 9-12)

Workplace Skills Standards Rationale

Most students will spend more than a third of their lives in a diverse and constantly changing workplace. Regardless of personal, career, or educational plans, students must demonstrate proficiency both in academics and the following workplace standards.

The Workplace Skills Standards are designed to be integrated into the traditional curriculum taught in schools at all levels and are most effectively learned in the context of an integrated effort involving parents, educators, business partners and members of the community. Student acquisition of critical workplace skills, with an emphasis on application, is a developmental process which encompasses an individual's entire lifetime. The demonstration of these skills is essential for individuals and contributes to the foundation of an educated citizenry.

Table 1. Workplace Skills Standards

STANDARD 1

Students use principles of effective oral, written and listening communication skills to make decisions and solve workplace problems.

STANDARD 2

Students apply computation skills and data analysis techniques to make decisions and solve workplace problems.

STANDARD 3

Students apply critical and creative thinking skills to make decisions and solve workplace problems.

STANDARD 4

Students work individually and collaboratively within team settings to accomplish objectives.

STANDARD 5

Students demonstrate a set of marketable skills which enhance career options.

STANDARD 6

Students illustrate how social, organizational and technological systems function.

STANDARD 7

Students demonstrate technological literacy for productivity in the workplace.

STANDARD 8

Students apply principles of resource management and develop skills that promote personal and professional well-being.

WORKPLACE SKILLS STANDARDS
BY LEVEL: PROFICIENCY (Grades 9-12) and DISTINCTION (Honors)

STANDARD 1

Students use principles of effective oral, written and listening communication skills to make decisions and solve workplace problems.

(Proficiency Grades 9-12)

- **1WP-P1. Exhibit interviewing skills (e.g., responding effectively to questions; using language that conveys maturity, sensitivity and respect; dressing appropriately; and using appropriate body language)**

PO 1. Respond effectively to interview questions
PO 2. Employ suitable interview language
PO 3. Describe appropriate dress/dress appropriately
PO 4. Exhibit appropriate body language

- **1WP-P2. Respond to verbal and nonverbal messages in ways that demonstrate understanding**

PO 1. Respond appropriately to verbal messages
PO 2. Respond appropriately to nonverbal message

- **1WP-P3. Communicate a clear message and respond to listener feedback**

PO 1. Formulate a clear message using acceptable format
PO 2. Respond appropriately to listener feedback

- **1WP-P4. Participate in conversation, discussion and/or group presentations using verbal and nonverbal communication with appropriate style and tone for audience and occasion**

PO 1. Apply group interaction skills (verbal and nonverbal)
PO 2. Adapt style and tone to audience and occasion (verbal and nonverbal)

- **1WP-P5. Maintain records and information completely and accurately**

PO 1. Identify basic record keeping skills
PO 2. Select method of record keeping
PO 3. Maintain a complete and accurate system

- **1WP-P6. Create documents (e.g., letters, memos, manuals, graphs, flowcharts, directions, reports and proposals) that are clear, appropriate to the audience, subject matter and purpose, and exhibit the writer’s use of correct grammar, spelling and punctuation**

PO 1. Select style and format

PO 2. Establish clear purpose for a specific audience

PO 3. Use correct grammar, spelling and punctuation

PO 4. Create an acceptable document

- **1WP-P7. Respond to informal and formal speeches using illustrations, statistics, comparisons and analogies to critique the effectiveness of presentations**

Note: P.O.s were developed to evaluate the effectiveness of the presentation and then formulate the response

PO 1. Evaluate the effectiveness of presentation

PO 2. Formulate a response

PO 3. Select style and medium

PO 4. Utilize appropriate tools (e.g., flow charts and illustrations)

- **1WP-P8. Summarize information from reading material, clearly and succinctly articulating its major points and proposals**

PO 1. Identify major points from written materials

PO 2. Summarize major points clearly and concisely

- **1WP-P9. Infer and locate the meaning of unknown or technical vocabulary**

PO 1. Using available resources, determine the meaning of unknown or technical vocabulary

- **1WP-P10. Research and synthesize information and develop a written document to convey that information which is appropriate to the audience**

PO 1. Judge the accuracy, appropriateness, style and plausibility of reports, proposals, and/or theories

PO 2. Determine audience needs and interests

PO 3. Develop accurate and appropriate documents that synthesize the information using accurate grammar, mechanics, and vocabulary

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **1WP-D1. Deliver a polished or impromptu speech that is organized and well suited to the audience, using effective body language and voice inflection to clarify and defend positions**
- **1WP-D2. Conduct a thoughtful interview, taking appropriate notes and summarizing the information learned**
- **1WP-D3. Use clear, concise and cogent language when presenting analytical responses to workplace literature, conveying technical information, and explaining complex concepts and procedures**
- **1WP-D4. Plan and produce an effective visual technical report or display**
- **1WP-D5. Draw conclusions and make predictions from technical information and data**
- **1WP-D6. Identify a problem, conduct research, and summarize the findings and solutions, using sources such as technical journals and government publications to support the original thesis**
- **1WP-D7. Express and defend their points of view by formulating sound, rational arguments and applying the art of persuasion and debate**

STANDARD 2

Students apply computation skills and data analysis techniques to make decisions and solve workplace problems.

(Proficiency Grades 9-12)

- **2WP-P1. Select and use appropriate computation techniques (i.e., mental, paper and pencil, and technology) to solve problems and determine the accuracy of results**
 - PO 1. Select appropriate computation techniques, such as averaging, estimation, statistical techniques, and appropriate electronic calculations
 - PO 2. Apply selected technique to solve problems
 - PO 3. Evaluate accuracy of results
- **2WP-P2. Construct projections and trends from raw data, charts, tables and graphs that summarize data from real-world situations**
 - PO 1. Evaluate data from real-world situations
 - PO 2. Construct projections and trends

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **2WP-D1. Analyze inferences from charts, tables and graphs that summarize data**
- **2WP-D2. Use appropriate technology to display and analyze workplace data**
- **2WP-D3. Evaluate data for interpretation and prediction**
- **2WP-D4. Test possible solutions using appropriate statistics**

STANDARD 3

Students apply critical and creative thinking skills to make decisions and solve workplace problems.

(Proficiency Grades 9-12)

- **3WP-P1. Develop a plan to solve complex problems by gathering, selecting and analyzing data; include determining the history and politics of the situation**

PO 1. Identify the problem

PO 2. Select needed data

PO 3. Analyze data

PO 4. Develop a plan within the context of the workplace to solve problem

- **3WP-P2. Identify and allocate available resources (e.g., time, money, materials, facilities and human)**

PO 1. Identify available resources

PO 2. Allocate resources

- **3WP-P3. Design and justify solutions by tracking and evaluating the results**

PO 1. Design justifiable solution

PO 2. Monitor results

PO 3. Evaluate results

- **3WP-P4. Demonstrate the ability to adapt new information to changing situations and requirements**

PO 1. Demonstrate the ability to apply new information to changing situations and requirements

- **3WP-P5. Combine ideas or information in new ways, make connections between seemingly unrelated ideas and reshape goals in ways that reveal new possibilities to solve problems**

PO 1. Integrate existing ideas and information in new ways to solve a problem

- **3WP-P6. Develop an inventory record keeping system to maintain data and information in a systematic fashion**

PO 1. Determine record keeping needs based on the nature of data

PO 2. Develop an appropriate record keeping system

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **3WP-D1. Apply a continuous improvement process to an existing business**
- **3WP-D2. Conduct a comprehensive workplace needs assessment, communicate their findings to the employer, and develop and defend a set of proposed solutions to address the needs**

STANDARD 4

Students work individually and collaboratively within team settings to accomplish objectives.

(Proficiency Grades 9-12)

- **4WP-P1. Demonstrate ability to work with others from diverse backgrounds, including identifying individual interests, aptitudes and skills; teach others new skills**
- **4WP-P2. Understand group dynamics**

PO 1. Identify personal qualities

PO 2. Demonstrate an understanding of group dynamics

PO 3. Work well with others

PO 4. Teach others new skills

- **4WP-P3. Work toward consensus by exchanging resources and resolving divergent interests**

PO 1. Demonstrate the ability to reach consensus by resolving divergent interests

- **4WP-P4. Monitor individual performance and team effectiveness**

PO 1. Conduct periodic checks of individual team member's contributions and the team's progress in obtaining goals

- **4WP-P5. Provide constructive feedback**

PO 1. Define feedback criteria

PO 2. Give constructive feedback to team participants that strengthens individual and group performance

- **4WP-P6. Assume leadership roles in team settings to accomplish tasks**

PO 1. Communicate thoughts and ideas to clarify roles and responsibilities

PO 2. Delegate tasks and responsibilities effectively

PO 3. Motivate team to accomplish tasks

PO 4. Evaluate team effectiveness

- **4WP-P7. Demonstrate punctuality, trustworthiness, civility and initiative on school projects**

PO 1. Complete school projects on time, with integrity, while displaying conduct befitting a citizen of the class

- **4WP-P8. Negotiate solutions to identified conflicts by separating people from the problem; focusing on interests, not positions; inventing options for mutual gain; and insisting on the use of objective criteria**

PO 1. Apply negotiation skills to solve conflicts

- **4WP-P9. Work and communicate with diverse clients, customers and community to satisfy their expectations**

PO 1. Identify/define expectations of clients, customers and community

PO 2. Develop a plan to meet those expectations

PO 3. Implement plan

PO 4. Evaluate plan

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **4WP-D1. Demonstrate teamwork and negotiation skills in innovative and effective ways to accomplish tasks**
- **4WP-D2. Pursue difficult and challenging leadership roles**

STANDARD 5

Students will demonstrate a set of marketable skills that enhance career options.

(Proficiency Grades 9-12)

- **5WP-P1. Write, evaluate and revise a career plan consistent with occupational interests, aptitudes and abilities**
 - PO 1. Assess career interests, aptitudes and abilities
 - PO 2. Develop a career pathway plan
 - PO 3. Evaluate and revise plan, as needed
- **5WP-P2. Demonstrate job acquisition skills by completing resume and job applications and by demonstrating interviewing techniques**
 - PO 1. Demonstrate job acquisition skills as defined by the instructor
- **5WP-P3. Exhibit work ethics and behaviors essential for success in all areas of life**
 - PO 1. Define ethics and effective workplace behaviors
 - PO 2. Use appropriate behaviors (time management, communications, interpersonal skills, life balance) that display success in life
- **5WP-P4. Demonstrate marketable occupational skills for an entry-level job based on career interests**

Note: This is an observational concept as opposed to a testable concept. This concept becomes the culmination of the previous three concepts. Demonstration of marketable occupational skills will be unique to each individual based on career interests and through and with the coordination of the counselors, teachers, parents and students.

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **5WP-D1. Evaluate goals and career options and adjust their career plans accordingly**
- **5WP-D2. Increase academic and occupational skills to become more marketable**
- **5WP-D3. Evaluate career plans on a continuous basis to determine appropriate educational strategies**

STANDARD 6

Students illustrate how social, organizational and technological systems function.

Definition: A system equals an organized framework made up of interrelated components acting together as a whole, in which a change in one component may impact the entire operation. Examples of systems are social (e.g., family, school) and technological (e.g., local area network, telephone).

(Proficiency Grades 9-12)

- **6WP-P1. Draft and interpret an organizational chart**
 - PO 1. Design an organizational chart
 - PO 2. Interpret an organizational structure
- **6WP-P2. Evaluate the quality and performance of workplace systems, distinguish trends, and recommend improvements and modifications to an existing system to improve products or services**
 - PO 1. Describe alternate workplace systems
 - PO 2. Evaluate the quality and performance of workplace systems
 - PO 3. Distinguish trends in workplace systems
 - PO 4. Generate recommendations for improvements/modifications to existing workplace systems
- **6WP-P3. Understand how changing a component of a system (e.g., changing how employees are assigned to work shifts, using the Internet) impacts the whole system**
 - PO 1. Analyze the cause and effect relationships within a real world setting

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **6WP-D1. Predict the impact of actions on system operations, diagnose deviations in the function of systems/organizations, and take necessary action to correct performance**
- **6WP-D2. Anticipate and project potential modification of systems to meet the needs of a changing society**

STANDARD 7

Students demonstrate technological literacy for productivity in the workplace.

(Proficiency Grades 9-12)

- **7WP-P1. Select and use appropriate technology to organize, send and receive information**
 - PO 1. Identify available technological tools
 - PO 2. Employ appropriate tools to organize, send, and receive information
- **7WP-P2. Analyze the impact of technological changes on tasks, people and society**
 - PO 1. Define technology as it relates to tasks, people, society, and careers
 - PO 2. Analyze the impact

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **7WP-D1. Demonstrate computer operation skills such as computer-aided drafting and computer-integrated manufacturing with other technologies in a variety of applications within a workplace setting**
- **7WP-D2. Design technologies which go beyond any existing technology**
- **7WP-D3. Adapt technology use to expand academic and personal growth**
- **7WP-D4. Identify or solve problems with computers and other technologies**

STANDARD 8

Students apply principles of resource management and develop skills that promote personal and professional well-being.

(Proficiency Grades 9-12)

- **8WP-P1. Set and prioritize their goals, estimate the time required to complete each assigned task, and prepare and follow the timeline/schedule**

PO 1. Develop a written personal/professional plan

- **8WP-P2. Prepare a short- and long-term personal budget; make expenditure, revenue and savings forecasts; maintain proper records**

PO 1. Implement a written personal financial plan

- **8WP-P3. Evaluate the impact of health choices (e.g., smoking, substance abuse, exercise) on personal and professional well-being**

PO 1. Describe the effects of health choices on a person's well being and his/her ability to complete work tasks

PO 2. Analyze and evaluate the impacts of health choices

- **8WP-P4. Identify strategies for balancing self, family, work, leisure and citizenship; ways to reduce the impact of stress; and how both relate to personal and career satisfaction**

PO 1. Develop written strategies for personal and career satisfaction

(Distinction - Honors)

Students know and are able to do all of the above and the following:

- **8WP-D1. Design a Request for Proposal process**
- **8WP-D2. Maintain a personal management system by setting goals, managing resources, and balancing life choices to accomplish career and life satisfaction**
- **8WP-D3. Select relevant goals, prioritize them, allocate time to each, and prepare and follow schedules when solving workplace or school projects**
- **8WP-D4. Organize and efficiently allocate material, facilities, supplies, parts and equipment to optimize their use in personal and professional goal attainment**

- **8WP-D5. Prepare budgets and make cost and revenue forecasts in a business, reconciling differences between inventory and financial records, and projecting resource needs over time**
- **8WP-D6. Design a task analysis flow chart**
- **8WP-D7. Assess knowledge and skills, delegate work accordingly, evaluate performance and provide feedback on human resources when working on a team project**
- **8WP-D8. Design a computer-generated workplace document with narrative and graphics, using desktop publishing software**
- **8WP-D9. Demonstrate an understanding of First-In First-Out (FIFO), Last-In First-Out (LIFO) and Just-in-Time inventory systems**
- **8WP-D10. Develop a workplace staffing plan and write job descriptions**
- **8WP-D11. Develop a bill processing system**